

# 3000 SERIES ROTARY ACTUATOR

## GENERAL SPECIFICATIONS

- BRUSHLESS DC MOTOR
- ABSOLUTE ANGLE FEEDBACK AND TURN COUNTING, PERSISTENT ACROSS POWER CYCLES
- OIL FILLED, SELF-CONTAINED PRESSURE COMPENSATION
- ISO F07 MOUNTING FLANGE PER ISO 5210/5211
- INTEGRATED LED SHAFT POSITION INDICATOR

## OPERATING CONDITIONS

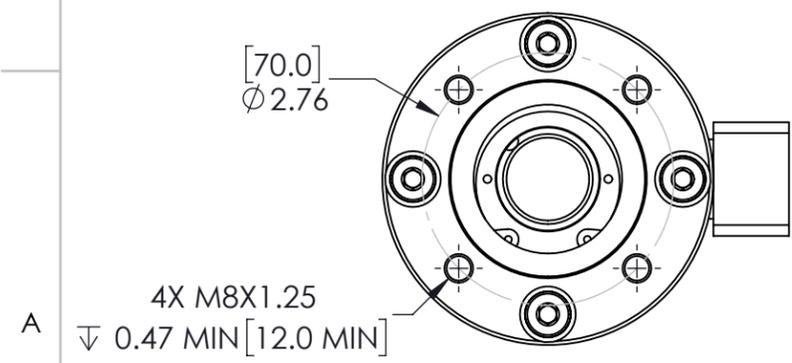
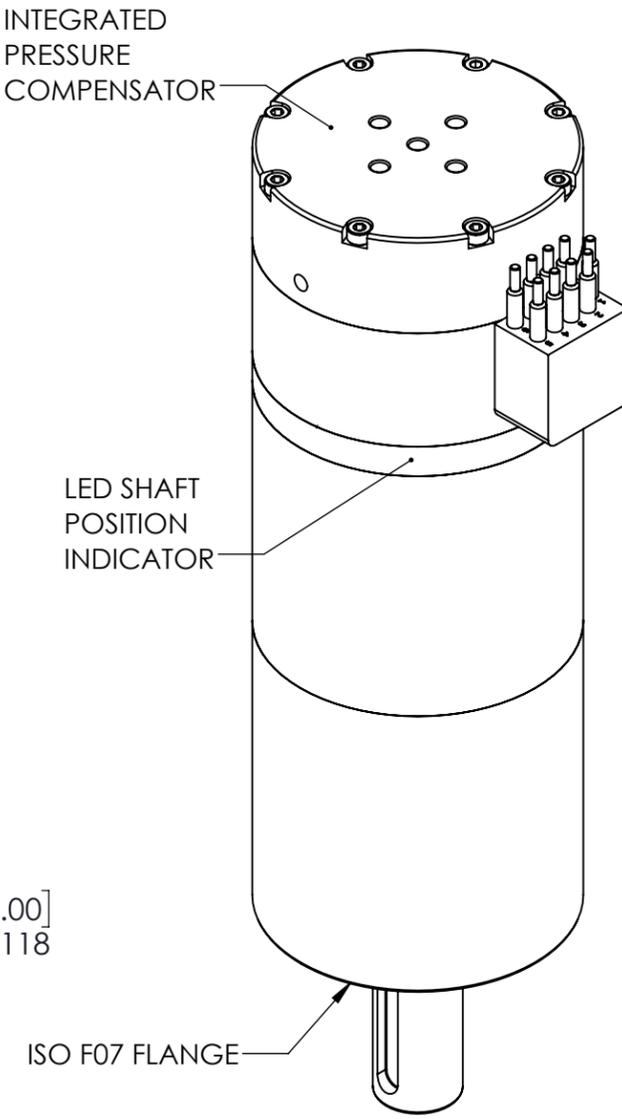
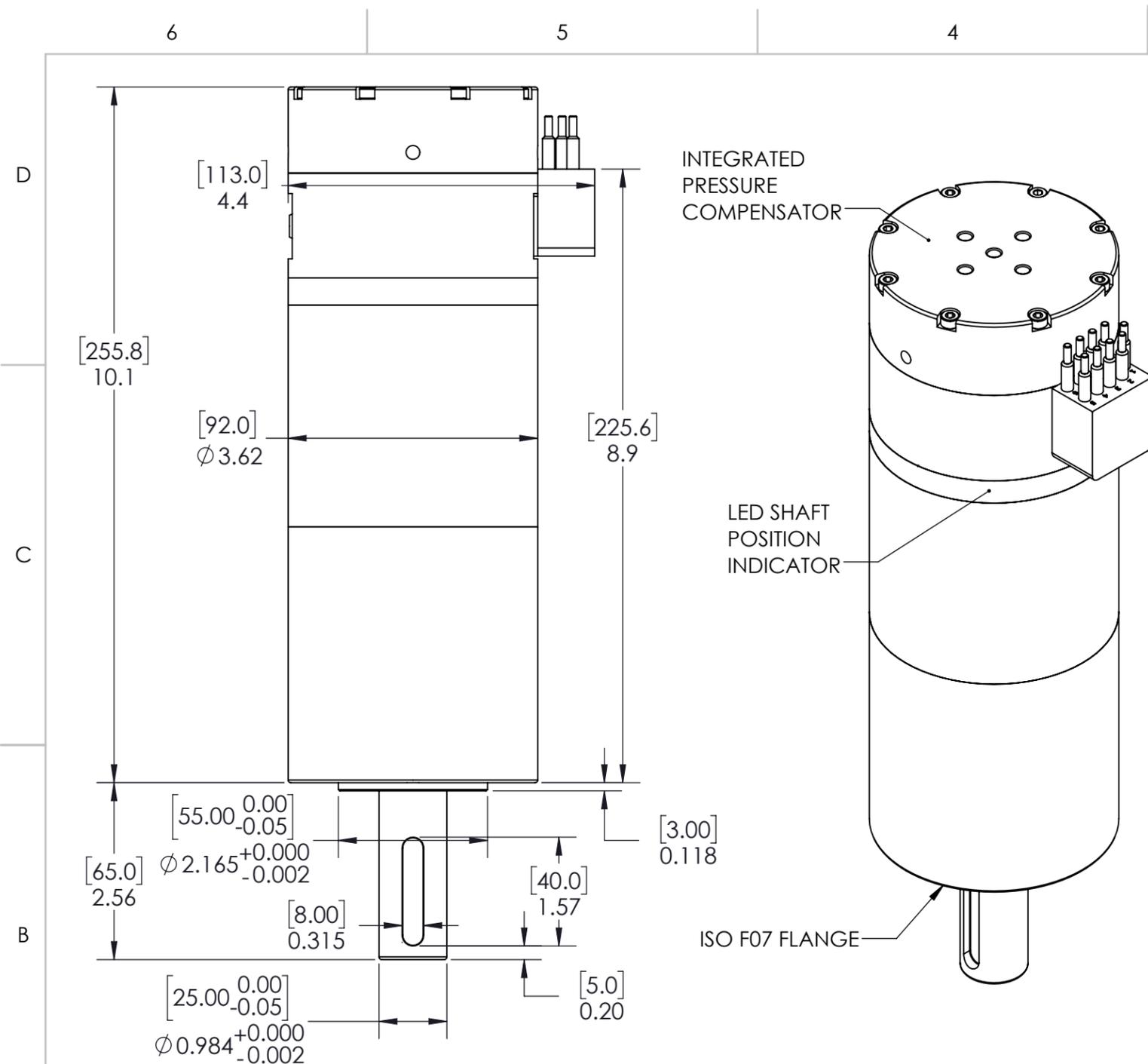
- VOLTAGE: 12-55 VDC STANDARD OPERATING RANGE, OTHER OPTIONS AVAILABLE
- OPERATIONAL PRESSURE: 10,000 PSI (>6000m DEPTH CAPABILITY)
- OPERATIONAL TEMPERATURE RANGE: -20°C TO 65°C
- STORAGE TEMPERATURE RANGE: -30°C TO 85°C
- OUTPUT SHAFT RADIAL LOAD: 450 LBF MAX
- OUTPUT SHAFT AXIAL LOAD: 350 LBF MAX

## ONBOARD MOTOR DRIVE AND SERVO SYSTEM

- CONFIGURABLE CURRENT LIMITS, POWER, AND SPEED
- COMMS: RS-232, RS-485, ANALOG, ETHERNET, CAN (ALL OPTIONS ISOLATED)
- CONNECTOR: 9 PIN SUBCONN LPBH STANDARD
- CONTACTLESS, NON-WEARING ABSOLUTE ANGULAR POSITION ENCODER
- DOES NOT REQUIRE HOMING
- 0.002° DEGREE RESOLUTION, 0.2° PRECISION, 1° ACCURACY
- STANDARD PROTOCOL: MODBUS
- STANDARD BAUD RATE: 115200

ACTUATOR PERFORMANCE	MAXIMUM CONTINUOUS TORQUE [FT-LBF]	MAXIMUM MOMENTARY TORQUE [FT-LBF]	MAXIMUM NO-LOAD SPEED [RPM]
HS	15	30	150
MT	30	60	100
HT	65	120	50
UT	100	150	25

APPROXIMATE WEIGHTS	STAINLESS	ALUMINUM	TITANIUM
DRY/SURFACE	21 lbs 9.5 kg	14 lbs 6.4 kg	16 lbs 7.3 kg
WET/SUBMERGED	17 lbs 7.7 kg	10 lbs 4.5 kg	12 lbs 5.4 kg



# SPECIFICATIONS

MODEL SHOWN:  
3100RHT-SSKSN-9S01S

MATERIAL	UNLESS OTHERWISE SPECIFIED: - DIMENSIONS ARE IN INCHES - DIMENSIONS IN [ ] ARE IN mm - TOLERANCES: DECIMALS: .X ±.05 .XX ±.015 .XXX ±.005 ANGULAR: MACHINED: ±0.5° OTHER: ±2° - THREAD DEPTHS ON TAPPED HOLES ARE MINIMUMS - TAP DRILL DIAMETERS ARE REFERENCE - MAX FILLET RADIUS ON INSIDE SHARP CORNERS: 0.005 - BREAK ALL SHARP EDGES 0.010 MAX AND REMOVE BURRS - SURFACE FINISH: ≤63 Ra (µin)	INITIALS	DATE
MATERIAL & FINISH COMMENTS:		DRAWN	DJF 09/01/2021
		APPROVED	DJF 06/06/2022
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF 2G ENGINEERING. ANY DISTRIBUTION OR REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF 2G ENGINEERING IS PROHIBITED.	INTERPRET GEOMETRIC DIMENSIONING & TOLERANCING PER ASME Y14.5-2009	

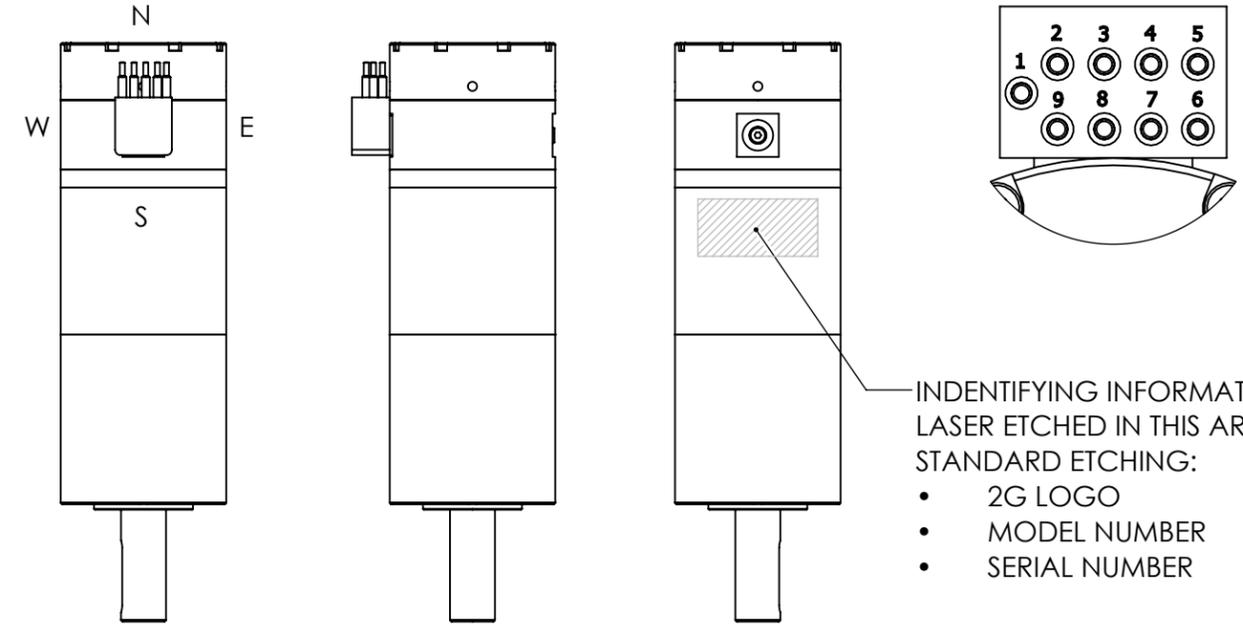
**2G ENGINEERING**  
WWW.2G-ENG.COM 608-825-4799

TITLE: **3000 SERIES ROTARY ACTUATOR DRAWING PACK**

SIZE <b>B</b>	THIRD ANGLE PROJECTION	DWG. NO. <b>3000R</b>	REV <b>C</b>
SCALE: 1:2	WEIGHT:	SHEET 1 OF 2	

[Click here for user manual and communication protocol information.](#)

CONNECTOR ORIENTATION



IDENTIFYING INFORMATION LASER ETCHED IN THIS AREA.  
STANDARD ETCHING:

- 2G LOGO
- MODEL NUMBER
- SERIAL NUMBER

PIN	9S	9V	9A	9K	9E
1	VIN -	VIN -	VIN -	VIN -	VIN -
2	VIN -	VIN -	VIN -	VIN -	VIN -
3	VIN +	VIN +	VIN +	VIN +	VIN +
4	VIN +	VIN +	VIN +	VIN +	VIN +
5	COMMS GND	COMMS GND	COMMS GND	COMMS GND	COMMS GND
6	RS-232 TX	RS-232 TX	RS-232 TX	RS-232 TX	ETHERNET TX+
7	RS-232 RX	RS-232 RX	RS-232 RX	RS-232 RX	ETHERNET TX-
8	RS-485 -	0-10V ANALOG INPUT	4-20 mA ANALOG INPUT	CAN LO	ETHERNET RX+
9	RS-485 +	0-10V ANALOG OUTPUT	4-20mA ANALOG OUTPUT	CAN HI	ETHERNET RX-

SERIES		OUTPUT		HOUSING MATERIAL		SHAFT STYLE		CONNECTOR ORIENTATION		COMMS		VOLTAGE		SOFTWARE	
<b>3100R</b>	SUBSEA	<b>HS</b>	HIGH SPEED	<b>SS</b>	316 STAINLESS STEEL, PASSIVATED	<b>KS</b>	25MM DIAMETER, 65MM LONG, KEYED	<b>N</b>	UP	<b>9S</b>	RS-232 AND RS-485	<b>01</b>	12-55VDC OPERATIONAL RANGE	<b>S</b>	STANDARD (MODBUS)
		<b>MT</b>	MID TORQUE	<b>AL</b>	6061-T6 ALUMINUM, BLACK HARDCOAT ANODIZED	CUSTOM SHAFTS AVAILABLE.	<b>S</b>	DOWN	<b>9V</b>	RS-232 AND 0-10V ANALOG VOLTAGE CONTROL	VOLTAGES AS HIGH AS 400V AVAILABLE	<b>G</b>	2G PACKETS		
		<b>HT</b>	HIGH TORQUE	<b>TI</b>	GRADE 5 TITANIUM		<b>E</b>	RIGHT	<b>9A</b>	RS-232 AND 4-20mA ANALOG CURRENT CONTROL					
		<b>UT</b>	ULTRA HIGH TORQUE				<b>W</b>	LEFT	<b>9K</b>	RS-232 AND CAN					
									<b>9E</b>	ETHERNET					
								<b>OTHER CONNECTORS &amp; COMMS PROTOCOLS AVAILABLE UPON REQUEST.</b>							

CUSTOM OPTIONS AVAILABLE. CONTACT 2G FOR APPLICATION ENGINEERING ASSISTANCE.

**STANDARD CONFIGURATIONS**

MATERIAL	<p><b>UNLESS OTHERWISE SPECIFIED:</b></p> <ul style="list-style-type: none"> <li>- DIMENSIONS ARE IN INCHES</li> <li>- DIMENSIONS IN [ ] ARE IN mm</li> <li>- TOLERANCES:</li> <li>DECIMALS:</li> <li>.X ±.05</li> <li>.XX ±.015</li> <li>.XXX ±.005</li> <li>ANGULAR:</li> <li>MACHINED: ±0.5°</li> <li>OTHER: ±2°</li> <li>- THREAD DEPTHS ON TAPPED HOLES ARE MINIMUMS</li> <li>- TAP DRILL DIAMETERS ARE REFERENCE</li> <li>- MAX FILLET RADIUS ON INSIDE SHARP CORNERS: 0.005</li> <li>- BREAK ALL SHARP EDGES 0.010 MAX AND REMOVE BURRS</li> <li>- SURFACE FINISH: ≤63 Ra (µin)</li> </ul>	INITIALS	DATE	<p><b>2G ENGINEERING</b> WWW.2G-ENG.COM 608-825-4799</p>	
MATERIAL & FINISH COMMENTS:		DRAWN	DJF		09/01/2021
	APPROVED	DJF	06/06/2022		
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		<p>SIZE <b>B</b></p>	<p>THIRD ANGLE PROJECTION</p>	<p>DWG. NO. <b>3000R</b></p>	<p>REV <b>C</b></p>
		<p>SCALE: 1:4</p>	<p>WEIGHT:</p>	<p>SHEET 2 OF 2</p>	