## 6100 SERIES SUBSEA ROTARY ACTUATOR

## **GENERAL SPECIFICATIONS:**

- OUTPUT TORQUE: UP TO 2000 FT-LB PEAK(T6 FRAME SIZE)
- OUTPUT SPEED: UP TO 2500 RPM NO-LOAD (T1 FRAME SIZE)
- **OUTPUT POWER:** 
  - UP TO 1.5 kW PEAK AT 48V
  - UP TO 6.0 kW PEAK AT VOLTAGES UP TO 800V<sup>[1]</sup>
- INTEGRATED SERVO CONTROL AND MOTOR DRIVER
- INTERNAL PRESSURE COMPENSATOR
- OPTIONAL SPRING-ENGAGED, POWER-OFF BRAKE
- LED SHAFT POSITION INDICATOR RING
- STANDARD CONNECTORS:
  - 9-PIN LOW-PROFILE POWER CONNECTOR
  - 13-PIN LOW-PROFILE COMMS CONNECTOR
- COMMUNICATION PHYSICAL LAYER OPTIONS: RS-232, RS-485, CAN, ETHERNET, ANALOG VOLTAGE CONTROL, AND ANALOG CURRENT CONTROL

## **OPERATING ENVIRONMENT:**

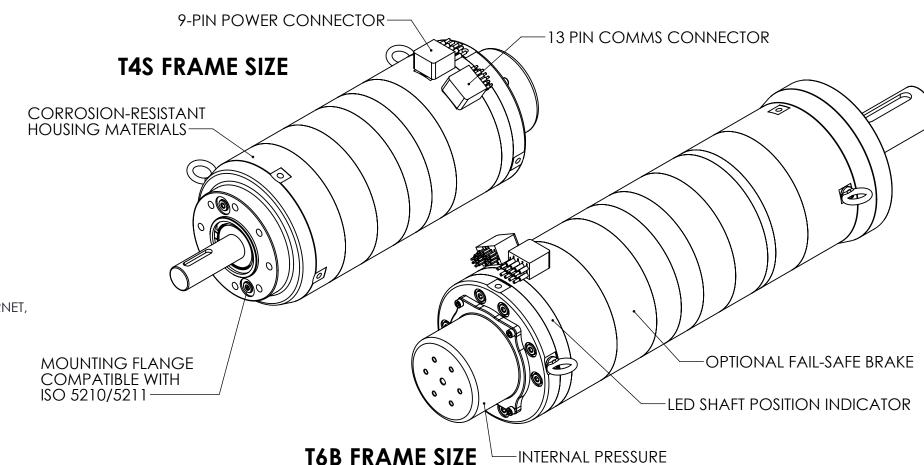
- DESIGNED FOR MISSION-CRITICAL SUBSEA USE
- PRESSURE-BALANCED OIL-FILLED HOUSING
- CORROSION RESISTANT HOUSING MATERIAL OPTIONS
  - STAINLESS STEEL, PASSIVATED
  - ALUMINUM, HARDCOAT ANODIZED
  - TITANIUM
- OPERATIONAL DEPTH RATING: >6000 METERS SEAWATER
- DESIGN PRESSURE: 10,000 psi
- OPERATING TEMPERATURE RANGE: -20°C TO 65°C
- STORAGE TEMPERATURE RANGE: -30°C TO 85°C
- **OPERATING VOLTAGE:** 
  - 48VDC STANDARD (12-55VDC RANGE)
  - UP TO 800V AVAILABLE. CONTACT 2G. [1

## **ONBOARD MOTOR DRIVER AND SERVO SYSTEM:**

- CLOSED-LOOP POSITION CONTROL WITH PID TUNING
- CONFIGURABLE LIMITS FOR CURRENT, POWER, VELOCITY, AND ACCELERATION
- CONFIGURABLE MOTION PROFILE GENERATOR
- CONTACTLESS NON-WEARING ABSOLUTE POSITION SENSOR
- DOES NOT REQUIRE HOMING
- 0.002° RESOLUTION, 0.2° PRECISION, 1° ACCURACY
- COMMS PROTOCOL: MODBUS & 2G PACKETS
- **DEFAULT BAUD RATE: 115200**

2G ENGINEERING CAN CUSTOMIZE ANY ACTUATOR TO SUIT YOUR APPLICATION. CERTAIN OPTIONS MAY IMPACT DIMENSIONS, PERFORMANCE, AND LEAD TIME. CONTACT 2G TO CONFIRM SPECIFICATIONS FOR YOUR APPLICATION.

[1] DIMENSIONS & PERFORMANCE OF HIGH-VOLTAGE UNITS MAY DIFFER FROM STANDARD 48V UNITS. CONTACT 2G FOR DETAILS.



RATED TORQUE (48VDC)									
FRAME SIZE	CONTINUOUS	INTERMITTENT	PEAK						
-	ft-lbf [Nm]	ft-lbf [Nm]	ft-lbf [Nm]						
T1	3.0 [4.1]	4.5 [6.1]	6.0 [8.1]						
T2	25 [34]	35 [47]	45 [61]						
T3	150 [203]	200 [271]	250 [339]						
T4	300 [407]	400 [542]	500 [678]						
T5	600 [813]	800 [1085]	1000 [1356]						
T6	1200 [1627]	1600 [2169]	2000 [2712]						

-INTERNAL PRESSURE

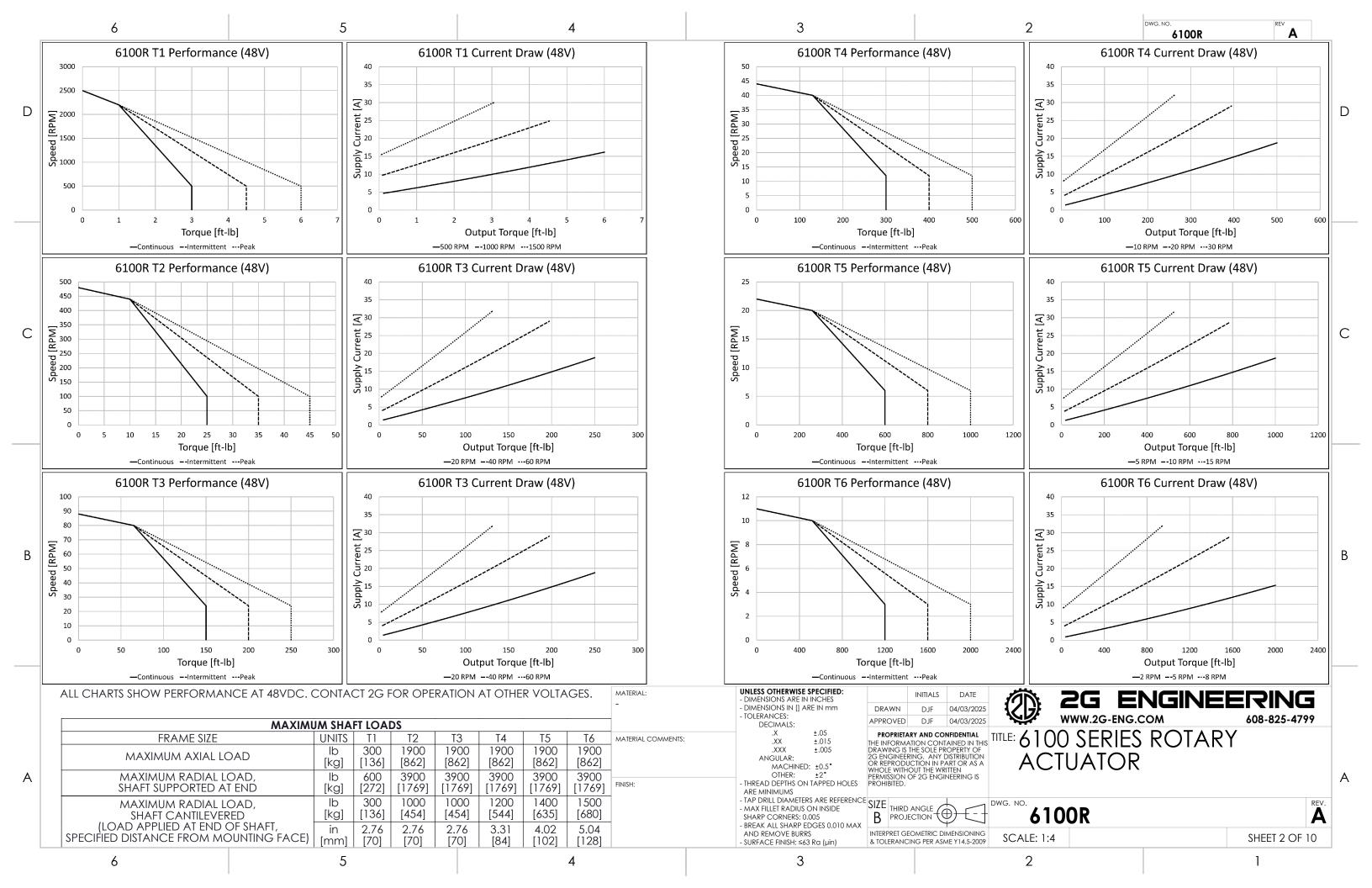
COMPENSATOR

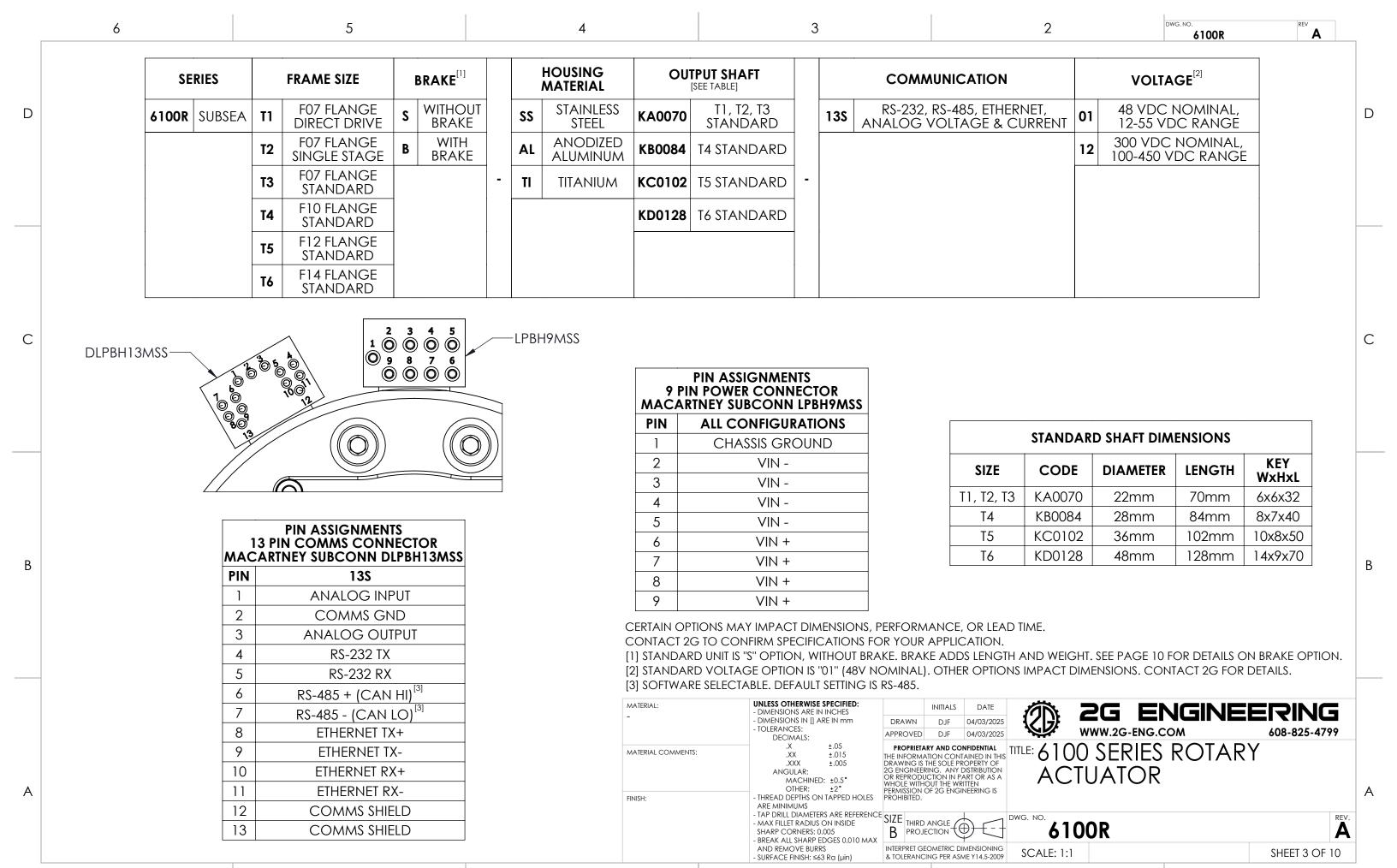
MATERIAL:	UNLESS OTHERWISE SPECIFIED: - DIMENSIONS ARE IN INCHES - DIMENSIONS IN [] ARE IN mm - TOLERANCES: DECIMALS:	DRAWN APPROVED	DJF	DATE 04/03/2025 04/03/2025			ENG.COM	INEE	<b>RING</b> 608-825-479	
MATERIAL COMMENTS:	.X ±.05 .XX ±.015 .XXX ±.005 .XXX ±.005 ANGULAR: MACHINED: ±0.5° OTHER: ±2° - THREAD DEPTHS ON TAPPED HOLES	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.		ACTUATOR		TARY				
	ARE MINIMUMS  - TAP DRILL DIAMETERS ARE REFERENC  - MAX FILLET RADIUS ON INSIDE  SHARP CORNERS: 0.005  - BREAK ALL SHARP EDGES 0.010 MAX  AND REMOVE BURRS  - SURFACE FINISH: ≤63 Rα (μin)	B PROJECTION (4)		\(\lambda \) \(\la			SHEET 1 OF 10			
	2				2			'	1	

5

D

С





5 4 3 2

