

# Comparison of New AND Pad Torque Sensor with Earlier Splined End Models

	MCRT®48850/51V AND 10262 & 20002	MCRT®48550/51V AND 10262 & 20002	MCRT®38569X SAE C Splines and Flanges ABS Approved	MCRT®28550/51T AND 10262 & 20002	
Specifications	Torque Ratings (lbf-in)	50 to 10,000 ●	50 to 10,000 ●	5,000 ◐	50 to 10,000 ●
	Overload (% of Range)	300 ●	200 ◐	200 ◐	200 ◐
	Maximum Speed Rating (rpm) - size 50	30,000 ●	15,000 ◐	1,800 ◐	15,000 ◐
	Maximum Speed Rating (rpm) - size 51	25,000 ●	10,000 ◐	Not Applicable	10,000 ◐
	Balance Grade per ISO 1940/1	2.5	Not Specified	Not Specified	Not Specified
	Combined Error (% of Rating) - Code N	≤±0.05% ●	≤±0.1% ◐	≤±0.4% ◐	≤±0.1% ◐
	Combined Error (% of Rating) - Code C*	≤±0.03% ●	Not Available	Not Available	Not Available
	Nonrepeatability (% of Rating) - Code N	≤±0.02 ●	≤±0.02 ●	Not Specified	≤±0.05 ◐
	Nonrepeatability (% of Rating) - Code C*	≤±0.01 ●	Not Available	Not Available	Not Available
	Accuracy Class (% of Rating) - Code N	0.05 ●	0.1 ◐	0.4 ◐	0.1 ◐
	Accuracy Class (% of Rating) - Code C*	0.036 ●	Not Available	Not Available	Not Available
	Zero Drift (% of Rating /°F) - Code N	≤±0.001 ●	≤±0.002 ◐	≤±0.01 ◐	≤±0.002 ◐
	Zero Drift (% of Rating /°F) - Code C*	≤±0.0006 ●	Not Available	Not Available	Not Available
	Span Drift (% of Reading/°F) - Code N	≤±0.002 ●	≤±0.002 ●	≤±0.01 ◐	≤±0.002 ●
	Span Drift (% of Reading/°F) - Code C*	≤±0.002 ●	Not Available	Not Available	Not Available
48 Hour Drift (% of Rating) - Code N	≤±0.03 ●	Not Specified	Not Specified	Not Specified	
48 Hour Drift (% of Rating) - Code C*	≤±0.03 ●	Not Specified	Not Specified	Not Specified	
Outputs	Power Calculation* Rate (Calculations/Second)	7,800	Not Available	Not Available	Not Available
	Torque Analog Out (Volt)	±10 or ±5	±5	4 - 20 mA or 12 ± 8 mA (2 wire)	±1.5mV/V
	Torque Frequency Output (kHz)	Not Available	Not Available	Not Available	Not Available
	Speed* Analog Out (Volt)	+10 or +5	Pulse Train Only*	Not Available	Pulse Train Only*
	Power* Analog Out (Volt)	±10 or ±5	Not Available	Not Available	Not Available
	Torque, Speed*, Power* Digital Out	RS232, RS422, RS485	Not Available	Not Available	Not Available
	Overrange (% of Range)	150	Not Specified	Not Specified	Not Specified
	Max/Min Capture Time (µS)	128	Not Available	Not Available	Not Available
Signal Filters	13: 0.1 to 1000 Hz	2: 1 & 500 Hz	2: 1 & 200 Hz	Not Available	
Features	Shunt Calibration of Active Torque Bridge	Yes	No	No	No
	Bipolar Calibration Circuitry	Yes	No	No	Yes
	Selectable Units/Measure Without Recalibration	33	Not Available	Not Available	Not Available
	Classify User Settable Limits	Yes	Not Available	Not Available	Not Available
	Tare Function	Yes	Not Available	Not Available	Not Available
	Remote Zero Function	Yes	No	No	No
Mechanical Characteristics	Mechanical Style	AND 10262/20002 Splines	AND 10262/20002 Splines	SAE C Splines	AND 10262/20002 Splines
	Length Overall (inch)	7.36	7.36	10.1	7.36
	Through Bore (inch)	Not Available	Not Available	Not Available	Not Available
	Axial Misalignment Rotor to Stator (inch)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Radial Misalignment Rotor to Stator (inch)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Foot Mount Option - Code F*	Not Available	Not Available	Not Available	Not Available
	Shaft Stiffness (lbf-in/rad)	4,680 to 572,000	5,570 to 613,000	520,000	5,570 to 613,000
	Rotating Inertia (ozf-in s²)	0.045 to 0.076	0.15 to 0.17	0.17	0.15 to 0.17
	Allowable Bending (lbf-in)	4,000	2,000	5,000	2,000
	Allowable Thrust (lbf)	Note 1	Note 1	Note 1	Note 1
	Sensor Material	15-5PH Stainless Steel	15-5PH Stainless Steel	15-5PH Stainless Steel	15-5PH Stainless Steel
	Weight (lb)	32	13 to 14	42	13 to 14
	Provision for Customers' Accelerometer	Yes	No	No	No
Provision for Customers' Thermocouple	Yes	No	No	No	
Provision to Drain Customer's Oil	Yes	No	No	No	
Specification Sheet	Bulletin 7413F	Bulletin 7403B	Bulletin 7640-ABS	Bulletin 765F	

- Notes:  
 \* Denotes an Optional Feature  
 1. The thrust capacity of a bearing supported sensor is dependent on its installation. If it is installed as a floating shaft its thrust capacity in lbs. is one half its torque rating in lbf-in. When it is foot mounted, its allowable thrust is determined by bearing loads; refer to the applicable instruction manual for more information.  
 2. Specifications for all models Code J including Combined Error, Nonrepeatability, Accuracy Class, Zero Drift, Span Drift, and 48 Hour Drift are Not Available.

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