KOLLMORGEN AKD SERVO DRIVE
TO
PACSCI F40 SERIES SERVO MOTOR

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G&G Technical
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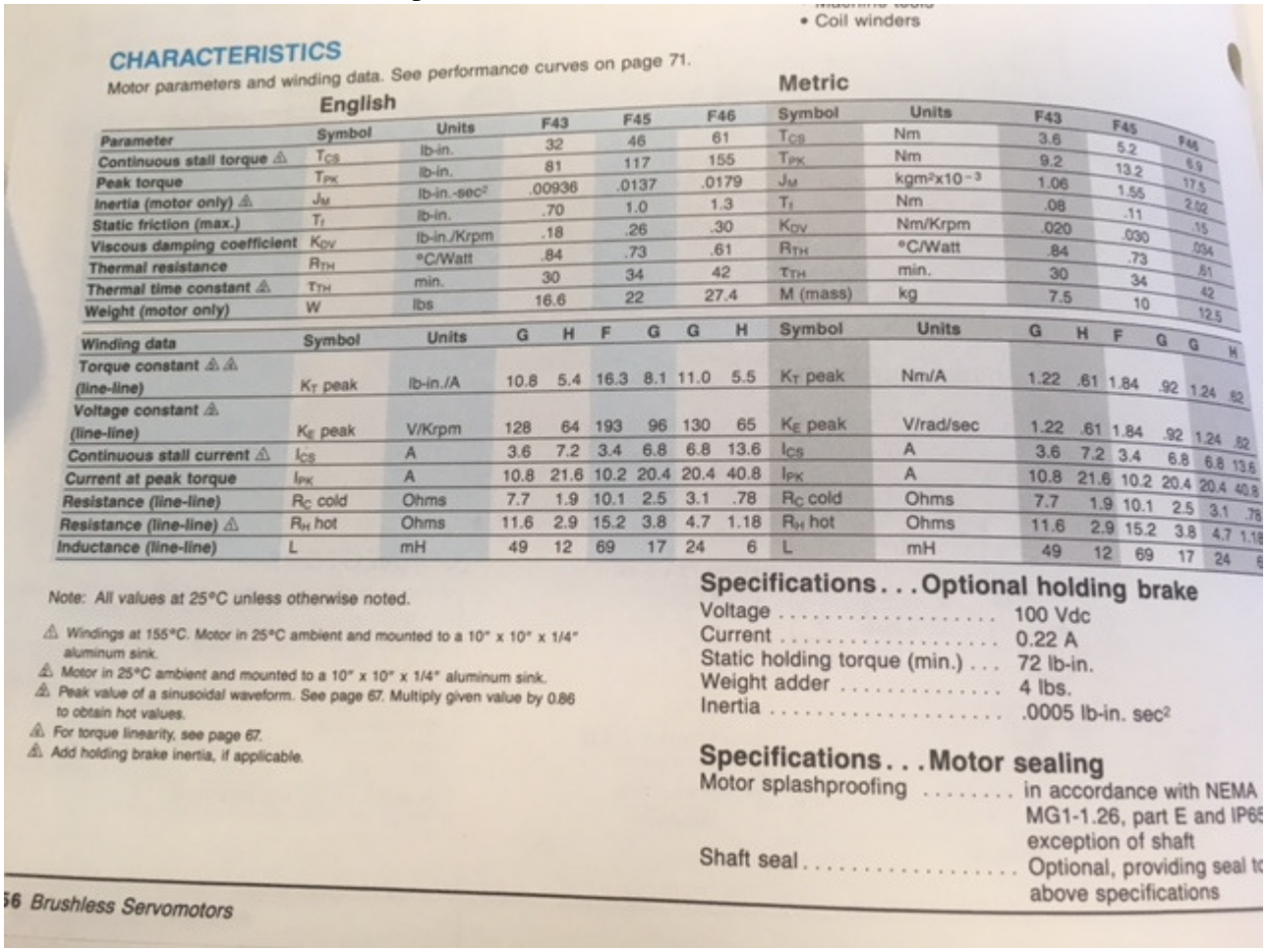
1) Select Feedback type 40, resolver.
    a. Verify position feedback poles = 2
    b. Verify transformation ratio is 0.50
2) Wire resolver to X10, follow correct labeling of signals.
    a. Once done verify with workbench that turning the motor shaft by hand CW looking at the shaft cause the feedback 1 dial in work bench to turn CW
        i. If above test fails double check X10 resolver wiring.
3) Motor Power wiring
    a. Motor Pin A goes to AKD X7, pin V
    b. Motor Pin B goes to AKD X7, pin W
    c. Motor Pin C goes to AKD X7, pin U
    d. Motor Pin D goes to AKD X7, pin PE
4) Create Custom motor using motor parameters
    a. F40 series poles = 8
    b. F40 series motor phase = 240



• Coil winders

CHARACTERISTICS

Motor parameters and winding data. See performance curves on page 71.

English						Metric				
Parameter	Symbol	Units	F43	F45	F46	Symbol	Units	F43	F45	F46
Continuous stall torque ⚠	T_{CS}	lb-in.	32	46	61	T_{CS}	Nm	3.6	5.2	6.9
Peak torque	T_{PK}	lb-in.	81	117	155	T_{PK}	Nm	9.2	13.2	17.5
Inertia (motor only) ⚠	J_M	lb-in.-sec²	.00936	.0137	.0179	J_M	kgm²x10⁻³	1.06	1.55	2.02
Static friction (max.)	T_f	lb-in.	.70	1.0	1.3	T_f	Nm	.08	.11	.15
Viscous damping coefficient	K_{DV}	lb-in./Krpm	.18	.26	.30	K_{DV}	Nm/Krpm	.020	.030	.034
Thermal resistance	R_{TH}	°C/Watt	.84	.73	.61	R_{TH}	°C/Watt	.84	.73	.61
Thermal time constant ⚠	τ_{TH}	min.	30	34	42	τ_{TH}	min.	30	34	42
Weight (motor only)	W	lbs	16.6	22	27.4	M (mass)	kg	7.5	10	12.5

Winding data	Symbol	Units	G	H	F	G	G	H	Symbol	Units	G	H	F	G	G	H
Torque constant ⚠⚠ (line-line)	K_T peak	lb-in./A	10.8	5.4	16.3	8.1	11.0	5.5	K_T peak	Nm/A	1.22	.61	1.84	.92	1.24	.62
Voltage constant ⚠ (line-line)	K_E peak	V/Krpm	128	64	193	96	130	65	K_E peak	V/rad/sec	1.22	.61	1.84	.92	1.24	.62
Continuous stall current ⚠	I_{CS}	A	3.6	7.2	3.4	6.8	6.8	13.6	I_{CS}	A	3.6	7.2	3.4	6.8	6.8	13.6
Current at peak torque	I_{PK}	A	10.8	21.6	10.2	20.4	20.4	40.8	I_{PK}	A	10.8	21.6	10.2	20.4	20.4	40.8
Resistance (line-line)	R_C cold	Ohms	7.7	1.9	10.1	2.5	3.1	.78	R_C cold	Ohms	7.7	1.9	10.1	2.5	3.1	.78
Resistance (line-line) ⚠	R_H hot	Ohms	11.6	2.9	15.2	3.8	4.7	1.18	R_H hot	Ohms	11.6	2.9	15.2	3.8	4.7	1.18
Inductance (line-line)	L	mH	49	12	69	17	24	6	L	mH	49	12	69	17	24	6

Note: All values at 25°C unless otherwise noted.

⚠ Windings at 155°C. Motor in 25°C ambient and mounted to a 10" x 10" x 1/4" aluminum sink.
⚠ Motor in 25°C ambient and mounted to a 10" x 10" x 1/4" aluminum sink.
⚠ Peak value of a sinusoidal waveform. See page 67. Multiply given value by 0.86 to obtain hot values.
⚠ For torque linearity, see page 67.
⚠ Add holding brake inertia, if applicable.

Specifications . . . Optional holding brake

Voltage	100 Vdc
Current	0.22 A
Static holding torque (min.)	72 lb-in.
Weight adder	4 lbs.
Inertia	.0005 lb-in. sec²

Specifications . . . Motor sealing

Motor splashproofing	in accordance with NEMA MG1-1.26, part E and IP65 exception of shaft
Shaft seal	Optional, providing seal to above specifications

56 Brushless Servomotors