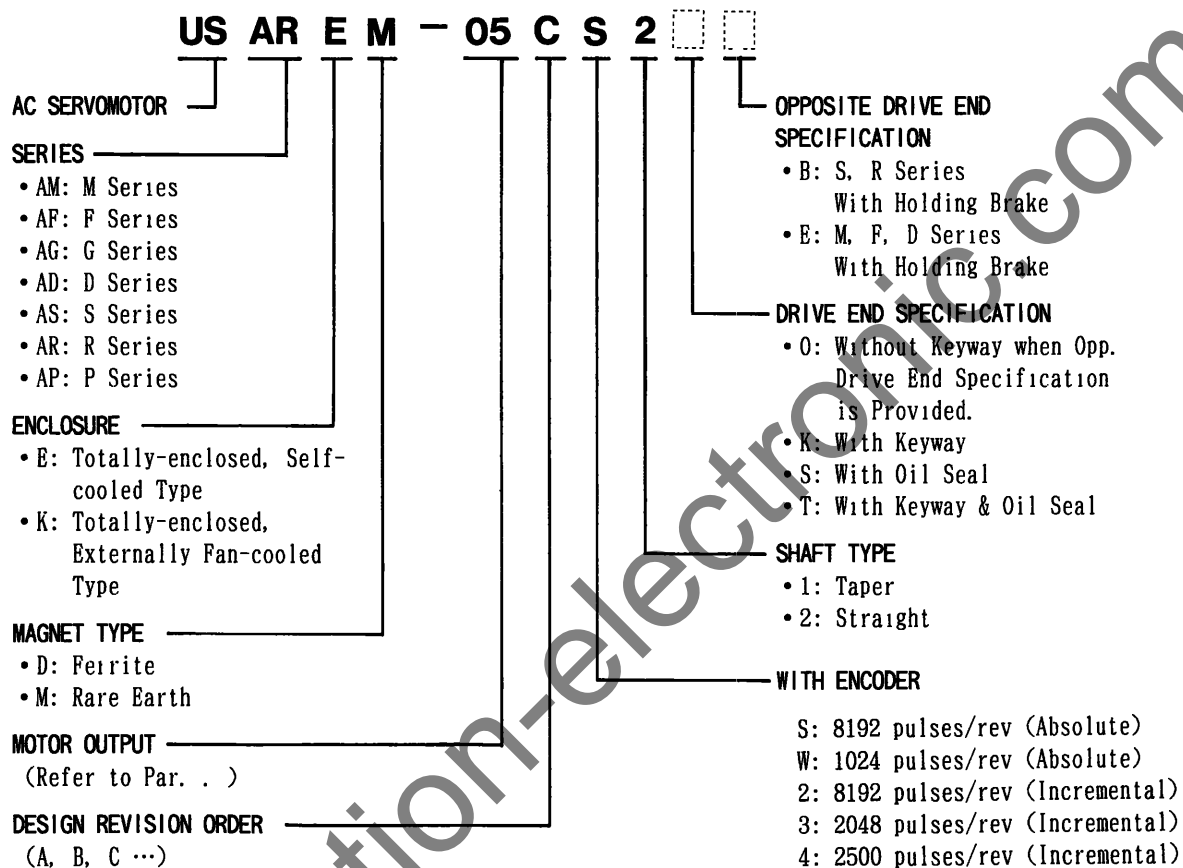
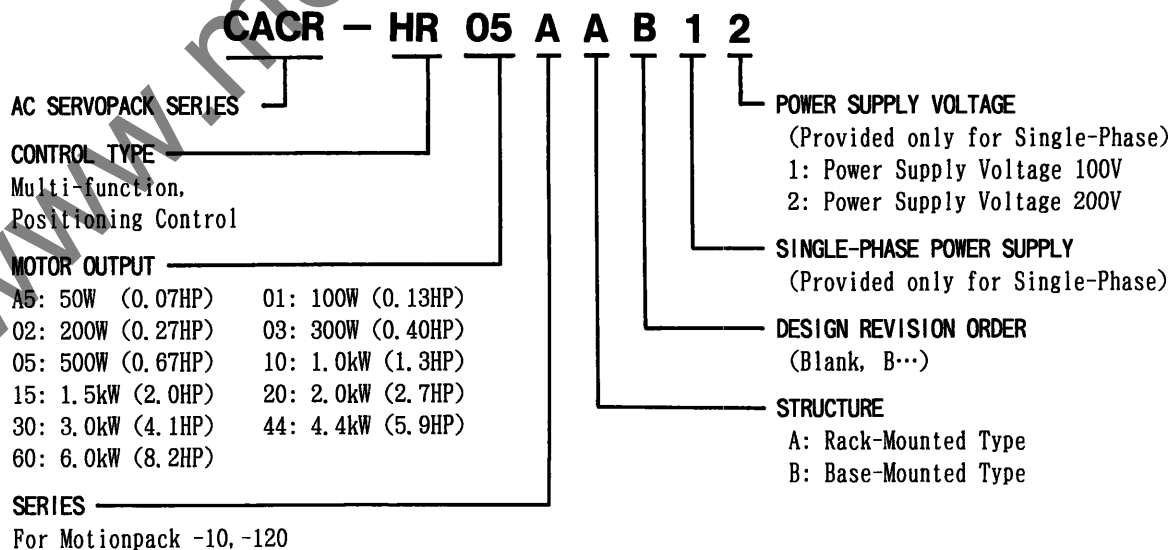


1.1 TYPE DESIGNATION

(1) Servomotor



(2) Servopack



2.1.4 D Series

(1) Ratings

Time Rating: Continuous

Insulation: Class F

Isolation Voltage: 1500 VAC, one minute

Insulation Resistance: 500 VDC, 10M Ω or more

Enclosure: Totally-enclosed, self-cooled

Ambient Temperature: 0 to + 40°C

Ambient Humidity: 20% to 80%(non-condensing)

Vibration: 15 μ m or below

Finish in Munsell Notation: N1.5

Excitation: Permanent magnet

Mounting: Flange mounted

Drive Method: Direct drive

Holding Brake Provided

(2) Combination with encoder

• Standard

USADED- [] EW : With absolute encoder (1024 pulses/rev)

USADED- [] E3 : With incremental encoder (2048 pulses/rev)

• Semi-Standard

USADED- [] ES : With absolute encoder (8192 pulses/rev)

USADED- [] E2 : With incremental encoder (8192 pulses/rev)

Table 2.4 Ratings and Specifications of D Series AC Servomotors

Item	Motor Type USADED-	05E []	10E []	15E []	22E []	37E []
Rated Output*	kW (HP)	0.5 (0.67)	1.0 (1.3)	1.5 (2.0)	2.2 (2.9)	3.7 (5.0)
Rated Torque*	N·m (lb·in)	2.35 (21)	4.80 (43)	7.16 (63)	10.5 (93)	17.7 (156)
Continuous Max Torque*	N·m (lb·in)	3.43 (30)	6.37 (56)	8.82 (78)	13.7 (122)	21.6 (191)
Instantaneous Peak Torque*	N·m (lb·in)	8.24 (73)	16.9 (149)	25.1 (222)	36.8 (326)	61.8 (547)
Rated Current*	A	3.5	7.9	12.6	16.6	23.3
Rated Speed*	r/min	2000				
Instantaneous Peak Speed*	r/min	2500				
Torque Constant	N·m/A (lb·n/l)	0.83 (7.38)	0.69 (6.07)	0.64 (5.64)	0.71 (6.25)	0.82 (7.29)
Moment of Motor Inertia $J_w (=GD^2/4)$	kg·m ² × 10 ⁻⁴ (lb·in·s ² × 10 ⁻³)	21.13 [†] (13.2, 11.3 [†])	32.24 [†] (28.6, 21.5 [†])	62.59 [†] (54.7, 52.1 [†])	83.80 [†] (73.8, 71.1 [†])	148.145 [†] (131, 128 [†])
Power Rate*	kW/s	2.7 4.4 [†]	7.3 9.7 [†]	8.2 8.6 [†]	13 14 [†]	21 22 [†]
Inertia Time Constant	ms	18 11 [†]	7.8 5.9 [†]	7.1 6.8 [†]	6.2 6.0 [†]	4.3 4.2 [†]
Inductive Time Constant	ms	4.4	6.9	9.4	11	15

* Typical value at armature winding temperature of 20°C, in combination with Servopack.

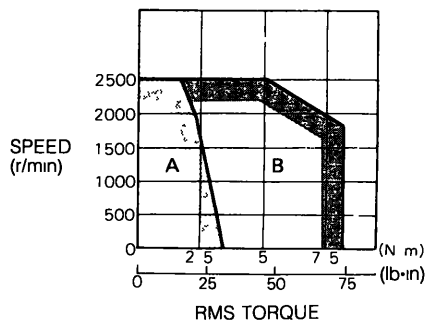
† Values show those of D series without holding brake.

(3) Speed-torque characteristics

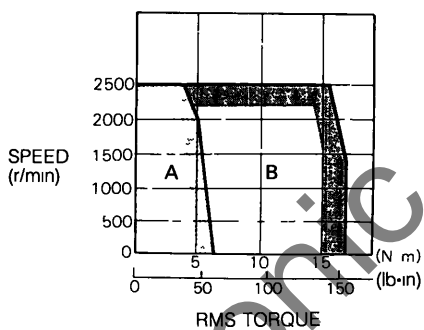
Typical at 20°C (Armature Winding Temp)

- A Continuous Duty Zone
- B Intermittent Duty Zone

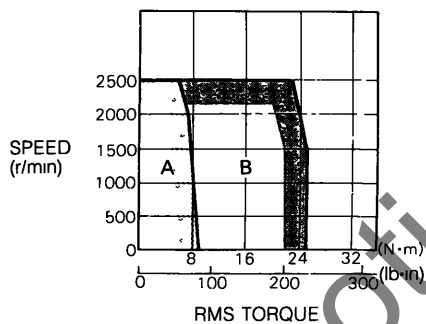
USADED-05E



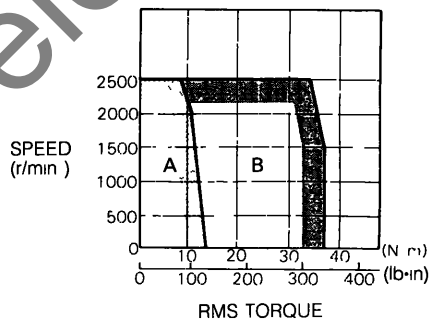
USADED-10E



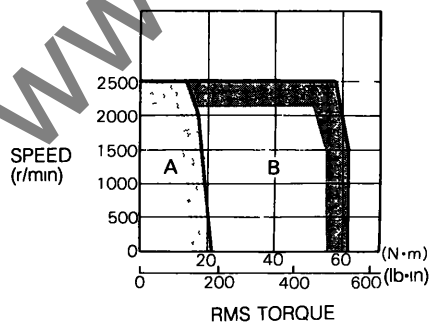
USADED-15E



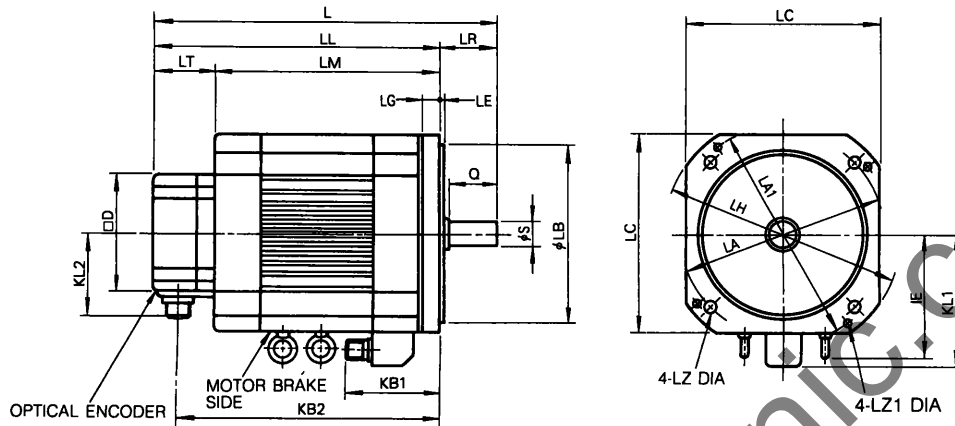
USADED-22E



USADED-37E



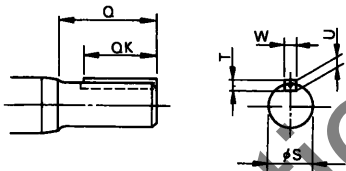
Drawing 1 USADED-05E3 to -37E3



Notes

- 1 Plug and clamp are not attached for receptacle connection
- 2 Motor should be mounted with connectors down

Straight Shaft/With Key



Detail of Shaft Extension

Note · Key and keyway comply with JIS B 1301-1976 (parallel key, keyway common class)

AC Servomotor Type USADED-	Shaft Extension					
	S	Q	QK	T	U	W
05E32K□	22 (0.8661)	$50^{+0.021}_{-0.0008}$ (1.97)	46 (1.77)	6 (0.236)	3.5 (0.138)	6 (0.2362)
10E32K□	22 (0.8661)	$50^{+0.021}_{-0.0008}$ (1.97)	45 (1.77)	6 (0.236)	3.5 (0.138)	6 (0.2362)
15E32K□	28 (1.1024)	$50^{+0.013}_{-0.0005}$ (1.97)	45 (1.77)	7 (0.275)	4 (0.157)	8 (0.3149)
22E32K□	28 (1.1024)	$50^{+0.013}_{-0.0005}$ (1.97)	45 (1.77)	7 (0.275)	4 (0.157)	8 (0.3149)
37E32K□	32 (1.2598)	$60^{+0.016}_{-0.0006}$ (2.36)	50 (1.97)	8 (0.315)	5 (0.197)	10 (0.3937)