

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

MITSUBISHI

MR-J2-20A HC-KFS23G2

SERVO AMPLIFIER MOTOR SET

Used with the applicable MELSERVO-J2 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Technical documentation applicable to MR-J2-20A HC-KFS23G2



General-Purpose AC Servo

MELSERVO

MODEL

Servo Motor

INSTRUCTION MANUAL

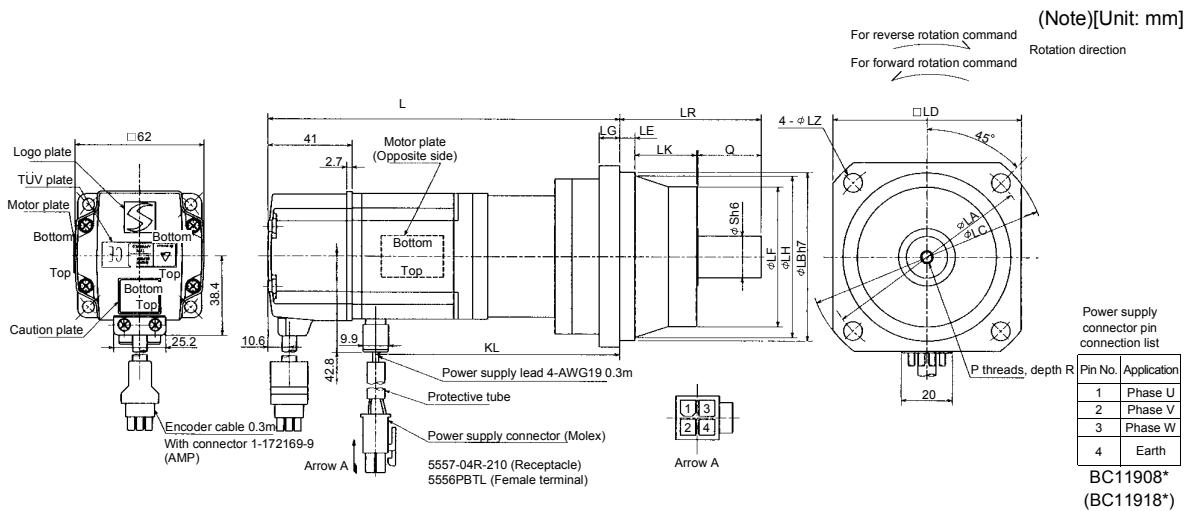
7. OUTLINE DIMENSION DRAWINGS

Model	Output [W]	Reduction Gear Model	Reduction Ratio	Inertia Moment $J[\times 10^{-4} \text{kg} \cdot \text{m}^2]$	Mass [kg]
HC-MFS23G2	200	BK1-05B-02MEKA	1/5	0.191	2.1
HC-MFS23G2	200	BK2-09B-02MEKA	1/9	0.208	3.5
HC-MFS23G2	200	BK3-20B-02MEKA	1/20	0.357	5.0
HC-MFS23G2	200	BK3-29B-02MEKA	1/29	0.276	5.0

Model	Output [W]	Variable Dimensions																
		LA	LB	LC	LD	LE	LF	LG	LH	LK	L	LR	KL	LZ	Q	S	P	R
HC-MFS23G2	200	80	65	95	70	6	48	8	60	23	157	55	106.6	6.6	25	16	M4	8
HC-MFS23G2	200	100	80	115	85	6	65	10	74	33	175	75	124.6	6.6	35	20	M5	10
HC-MFS23G2	200	115	95	135	100	8	75	10	85	35	180	85	129.6	9	40	25	M6	12
HC-MFS23G2	200	115	95	135	100	8	75	10	85	35	180	85	129.6	9	40	25	M6	12

Model	Output [W]	Reduction Gear Model	Reduction Ratio	Inertia Moment $J[\times 10^{-4} \text{kg} \cdot \text{m}^2]$	Mass [kg]
HC-KFS23G2	200	BK1-05B-02MEKA	1/5	0.360	2.1
HC-KFS23G2	200	BK2-09B-02MEKA	1/9	0.380	3.5
HC-KFS23G2	200	BK3-20B-02MEKA	1/20	0.530	5.0
HC-KFS23G2	200	BK3-29B-02MEKA	1/29	0.450	5.0

Model	Output [W]	Variable Dimensions																
		LA	LB	LC	LD	LE	LF	LG	LH	LK	L	LR	KL	LZ	Q	S	P	R
HC-KFS23G2	200	80	65	95	70	6	48	8	60	23	157	55	106.6	6.6	25	16	M4	8
HC-KFS23G2	200	100	80	115	85	6	65	10	74	33	175	75	124.6	6.6	35	20	M5	10
HC-KFS23G2	200	115	95	135	100	8	75	10	85	35	180	85	129.6	9	40	25	M6	12
HC-KFS23G2	200	115	95	135	100	8	75	10	85	35	180	85	129.6	9	40	25	M6	12



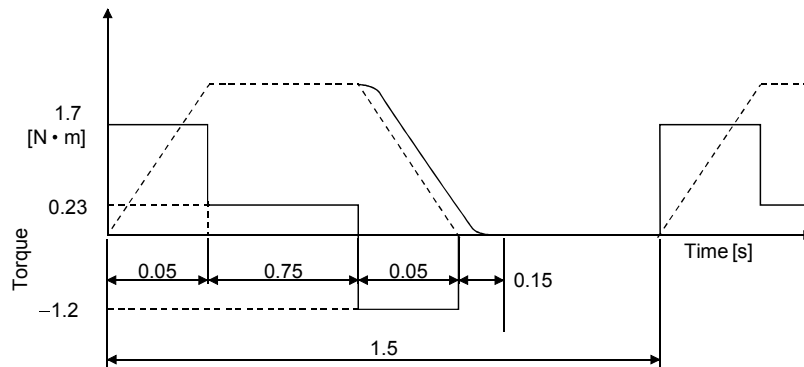
8. CALCULATION METHODS FOR DESIGNING

(9) Continuous effective load torque

$$T_{rms} = \sqrt{\frac{T_{Ma}^2 \cdot t_{psa} + T_L^2 \cdot t_c + T_{Md}^2 \cdot t_{psd}}{t_f}} = 0.42[N \cdot m]$$

The continuous effective load torque must be lower than the servo motor's rated torque.

(10) Torque pattern



(11) Selection results

The HC-MF23 servo motor and MR-J2-20A servo amplifier are selected.

(a) Electronic gear setting

$$CMX = 8192$$

$$CDV = 1000$$

(b) During rapid feed

$$\text{Servo motor speed} \quad N_0 = 3000 [r/min]$$

(c) Acceleration/deceleration time constant

$$t_{psa} = t_{psd} = 0.05[s]$$