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Product description

MAC-EcoSM-220 series (AC 220V) servo motors have various series of frame size: 60mm,80mm,90mm, 110mm,130mm,150mm and 180mm; four series of rated speed: 1500rpm,2000rpm,2500rpm and 3000rpm. Motors are equipped with standard 2500P/R incremental encoder. With selection of high temperature resistance, high energy density permanent magnetic material and optimal design of the electromagnetic parameters MAC-EcoSM-220 servo motor can maintain a good working condition and fast response in whole product life cycle. MACTROL provides customized solutions based on any specified requirements from customers, e.g.: Rated torque, rated speed, maximum speed, dimension, plug connection & encoders etc.

At a glance

- Compact architecture and high-power density
- Middle rotor inertia and rapid response
- Super high coercivity rare earth permanent magnet Overheat protection capability (need temperature sensor integrated)
- Strong anti-demagnetization capability
- Various frame installation size
- Full-closed design in IP65

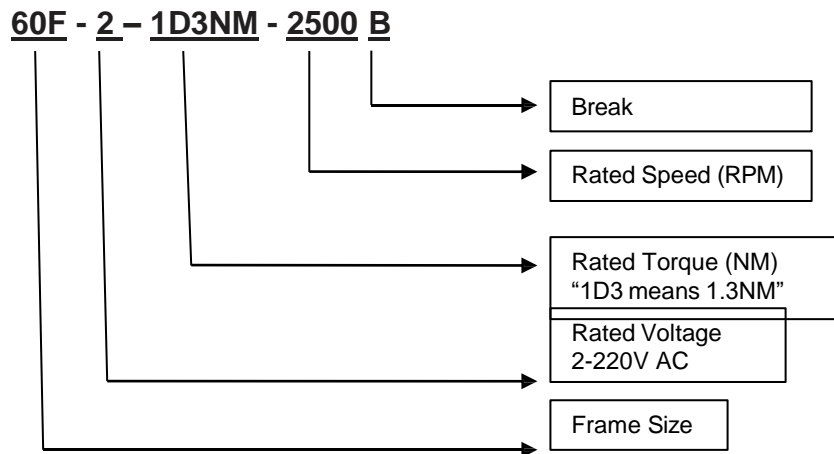
Customer benefits

- Ultra-energy saving
- High response and accuracy
- Low noise & low temperature rise
- High reliability makes less maintenance work
- Low rotor inertia, which improves system rapidity (more option for rotor inertia can be customized)

Specifications

Items	Description
Rated Voltage	220V
Encoder Line Number (PPR)	2500
Insulation Class	Class B
Enclosure rating	IP 65
Ambient operating temperature	-20°C~+50°C
Ambient operating humidity	Below 90% RH No dewing
Thermal protection	optional
Cooling method	air cooling

Model Definition



Model	Rated torque N·m	Max torque N·m	Rated Speed rpm	Max Speed rpm	Rated power kW	Rated voltage Vac	Rated current A	Rotor inertia kg.cm ²	Pole pair	Weight kg	Length mm
Frame size 60											
60F-2-1D3NM-3000	1.27	3.8	3000		0.4	220	2.8	0.302*10 ⁻⁴	4	1.9	131
60F-2-1D9NM-3000	1.91	5.73	3000		0.6	220	3.5	0.438*10 ⁻⁴	4	2.2	154
Frame size 80											
80F-2-2D4NM-3000	2.4	7.2	3000		0.75	220	4.2	1.2*10 ⁻⁴	4	3.2	160
80F-2-3D3NM-3000	3.3	9.9	3000		1	220	4.5	1.58*10 ⁻⁴	4	3.9	181
Frame size 90											

Model	Rated torque N-m	Max torque N-m	Rated Speed rpm	Max Speed rpm	Rated power kw	Rated voltage Vac	Rated current A	Rotor inertia kg.cm2	Pole pair	Weight kg	Length mm
90F-2-3D5NM-2000	3.5	10.5	2000		0.73	220	4.2	$3.4*10^{-4}$	4	4.2	175
90F-2-04NM-2500	4	12	2500		1	220	4.5	$3.7*10^{-4}$	4	4.6	185
Frame size 110											
110F-2-02NM-3000	2	6	3000		0.6	220	4	$0.425*10^{-3}$	4	4.5	158
110F-2-04NM-3000	4	12	3000		1.2	220	5	$0.828*10^{-3}$	4	6.2	189
110F-2-05NM-3000	5	15	3000		1.5	220	6	$0.915*10^{-3}$	4	7	204
110F-2-06NM-2000	6	18	2000		1.2	220	6	$1.111*10^{-3}$	4	7.8	217
Frame size 130											
130F-2-04NM-2500	4	13	2500		1	220	4	$1.101*10^{-3}$	4	6.5	165
130F-2-05NM-2000	5	15	2000		1	220	5	$1.333*10^{-3}$	4	7.3	173
130F-2-05NM-2500	5	15	2500		1.3	220	5	$1.333*10^{-3}$	4	7.3	173
130F-2-06NM-2500	6	18	2500		1.5	220	6	$1.544*10^{-3}$	4	8	183
130F-2-7D7NM-2500	7.7	23.1	2500		1.6	220	6	$2.017*10^{-3}$	4	9.2	197
130F-2-7D7NM-2000	7.7	23.1	2000		2	220	7.5	$2.017*10^{-3}$	4	9.2	197
130F-2-7D7NM-3000	7.7	23.1	3000		2.4	220	9	$2.017*10^{-3}$	4	9.2	197
130F-2-10NM-1500	10	30	1500		1.5	220	6	$2.595*10^{-3}$	4	10.8	218
130F-2-10NM-2500	10	30	2500		2.6	220	10	$2.595*10^{-3}$	4	10.8	218
130F-2-15NM-1500	15	45	1500		2.3	220	9.5	$3.24*10^{-3}$	4	14.4	263
130F-2-15NM-2500	15	45	2500		3.8	220	17	$3.24*10^{-3}$	4	14.4	263
Frame size 150											
150F-2-15NM-2500	15	45	2500		3.8	220	16.5	$6.15*10^{-3}$	4	19.4	230
150F-2-18NM-2000	18	54	2000		3.6	220	16.5	$6.33*10^{-3}$	4	21.2	250
150F-2-23NM-2000	23	69	2000		4.7	220	20.5	$8.94*10^{-3}$	4	24.2	280
150F-2-27NM-2000	27	81	2000		5.5	220	20.5	$11.19*10^{-3}$	4	27.2	306
Frame size 180											
180F-2-17D2NM-1500	17.2	43	1500		2.7	220	10.5	$3.4*10^{-3}$	4	19.5	226
180F-2-19NM-1500	19	47	1500		3	220	12	$3.8*10^{-3}$	4	20.5	232
180F-2-2D15M-2000	21.5	53	2000		4.5	220	16	$4.7*10^{-3}$	4	22.2	243
180F-2-27NM-1000	27	67	1000		2.9	220	12	$6.1*10^{-3}$	4	25.5	262
180F-2-27NM-1500	27	67	1500		4.3	220	16	$6.1*10^{-3}$	4	25.5	262
180F-2-35NM-1000	35	70	1000		3.7	220	16	$8.6*10^{-3}$	4	30.5	292
180F-2-35NM-1500	35	70	1500		5.5	220	24	$8.6*10^{-3}$	4	30.5	292
180F-2-48NM-1500	48	96	1500		7.5	220	32	$9.5*10^{-3}$	4	40	346

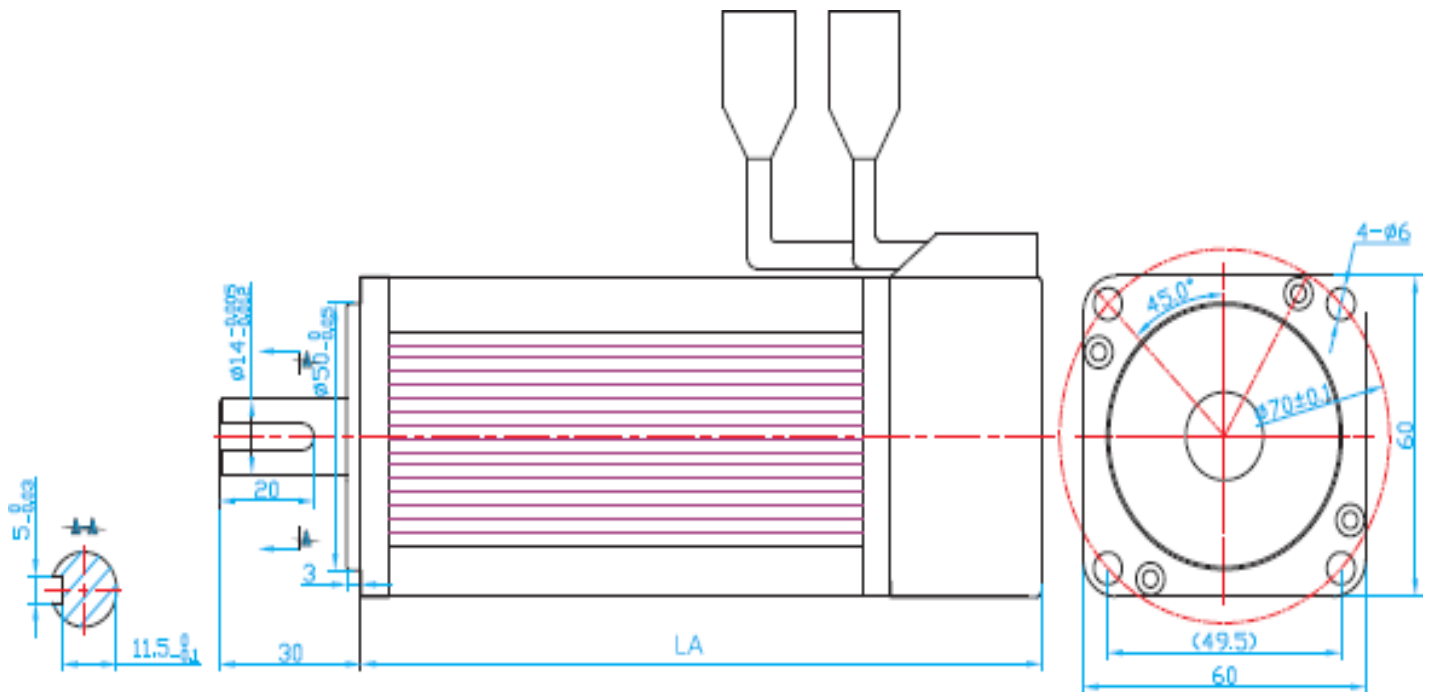


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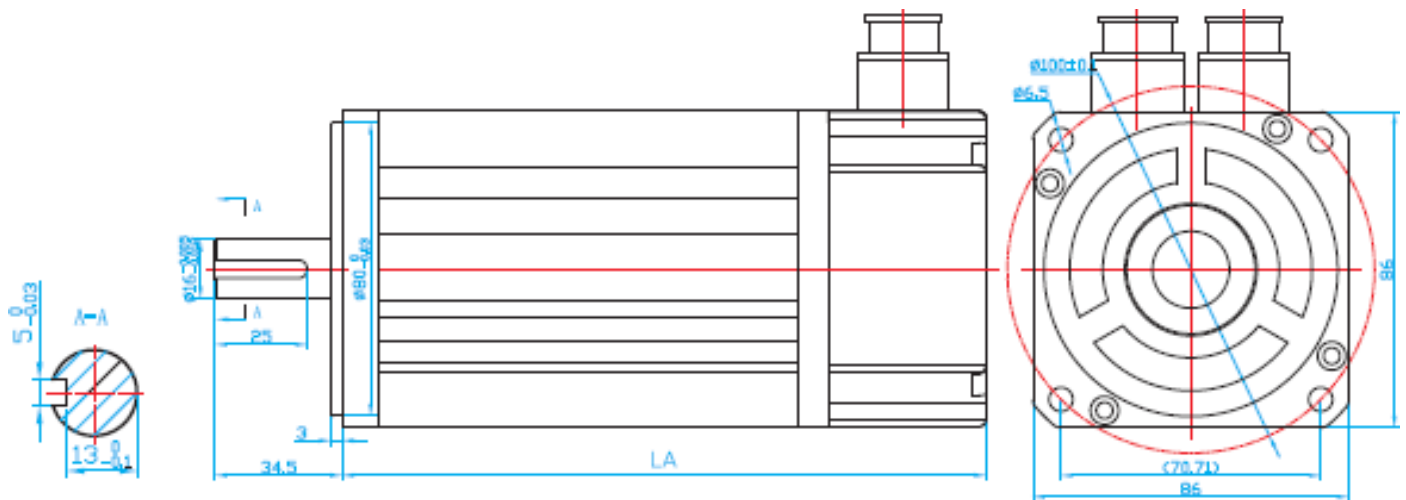
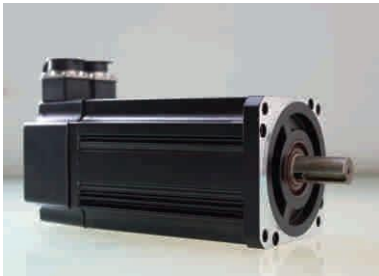
MAC-EcoSM-220

Dimensional Drawing

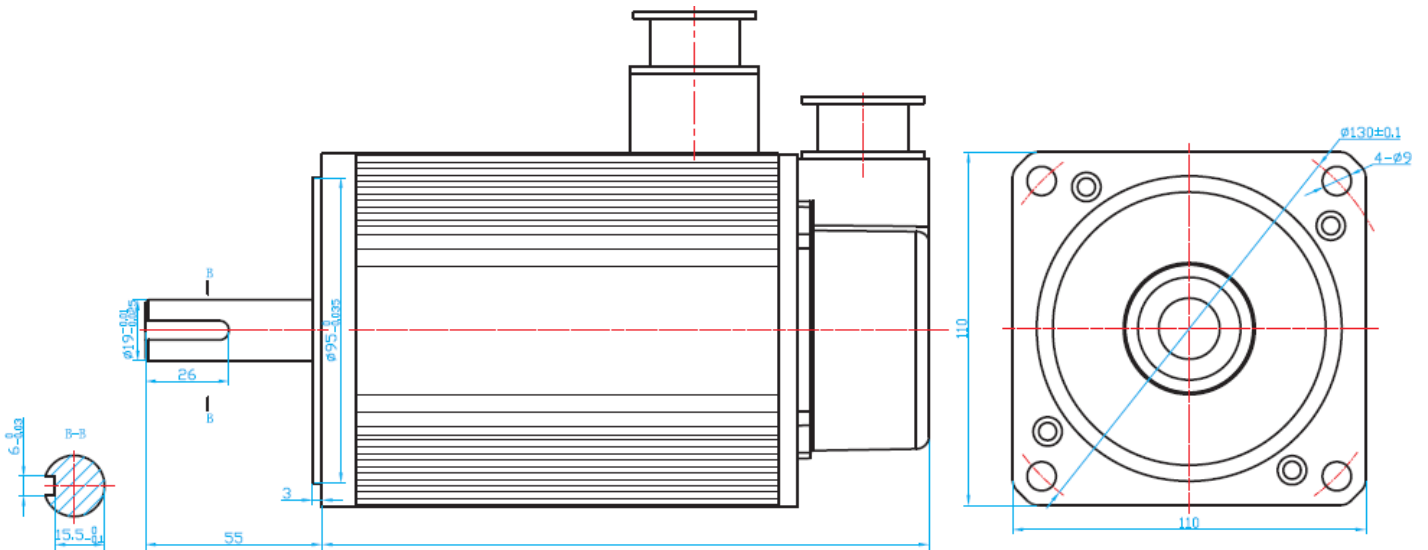
Flame Size 60



Flame Size 90



Flame Size 110

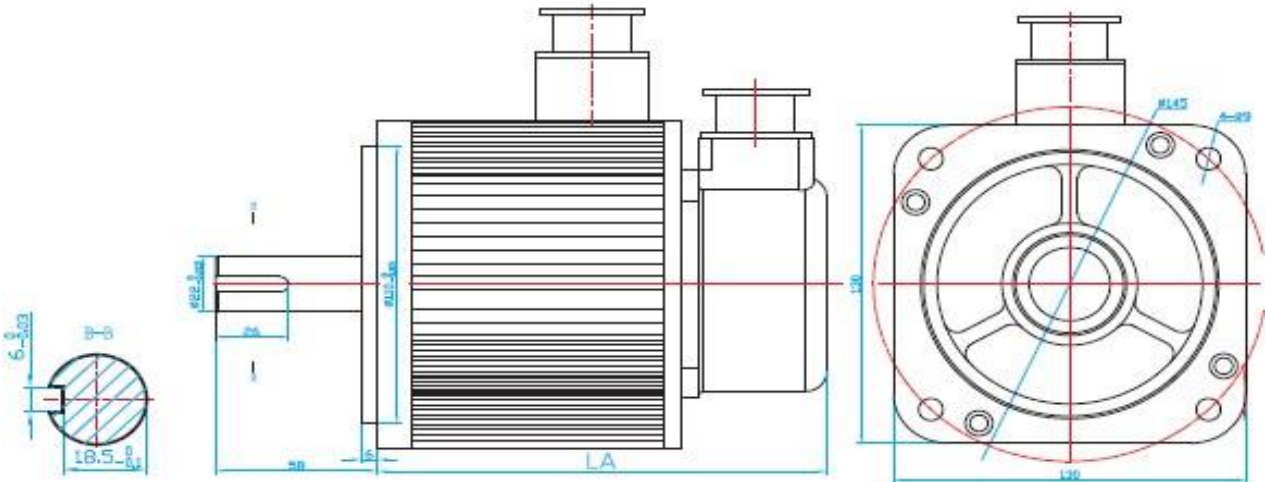




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Flame Size 130

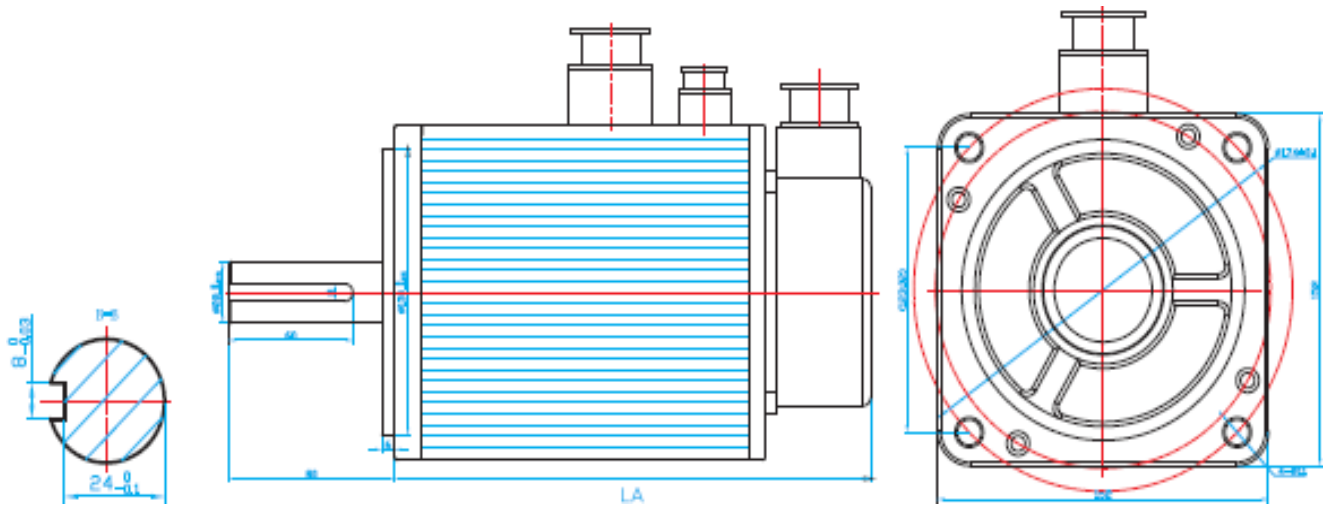




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Flame Size 150



Flame Size 180

