

# □80 SERVO MOTOR

## ■ Technical specification

	Symbols	Units	Type			
			80SMA25-30	80SMA50-30	80SMA75-30	80SMA100-30
Drive power supply	$U_N$	V	220Vac, 1phase / 3phase			
Rated output power	$P_N$	W	250	500	750	1000
Pole counts	P	-	8			
Rated rotational speed	$n_N$	RPM	3000			
Maximum speed	$n_P$	RPM	3600			
Rated torque	$T_N$	Nm	0.8	1.6	2.4	3.18
Peak torque	$T_P$	Nm	2.3	4.6	7.0	9.5
Rated winding current	$I_N$	Arms	1.5	3.0	4.5	5.7
Peak winding current	$I_P$	Arms	4.5	9.0	13.5	17.1
Voltage constant $\pm 5\%$	$k_e$	Vrms/Krpm	35.5	35.8	36.1	37
Torque constant $\pm 5\%$	$k_t$	Nm/Arms	0.53	0.53	0.53	0.55
Moment of inertia	$J_r$	Kgm <sup>2</sup>	$0.44 \times 10^{-4}$	$0.69 \times 10^{-4}$	$0.93 \times 10^{-4}$	$1.17 \times 10^{-4}$
Winding resistance (Ph/Ph) * <sup>1</sup>	$R_a$	$\Omega$	5.14	2.47	1.50	1.13
Winding inductance (Ph/Ph)	$L_a$	mH	27.6	13.3	8.0	6.3
encoder	2500P/r incremental					
Insulation class	B					
IP rating	IP65(except shaft through hole and cable end connetor)					
Ambient temperature	0 to 40°C(free from freezing),Storage -20 to 80°C					
Ambient humidity	85%RH or lower (free from condensing)					
Installation location	Indoors (no direct sunlight), free from corrosive gas, inflammable gas, oil mist and dust					
Altitude	1000m or lower					
Vibration resistance	49m/s <sup>2</sup> or less					

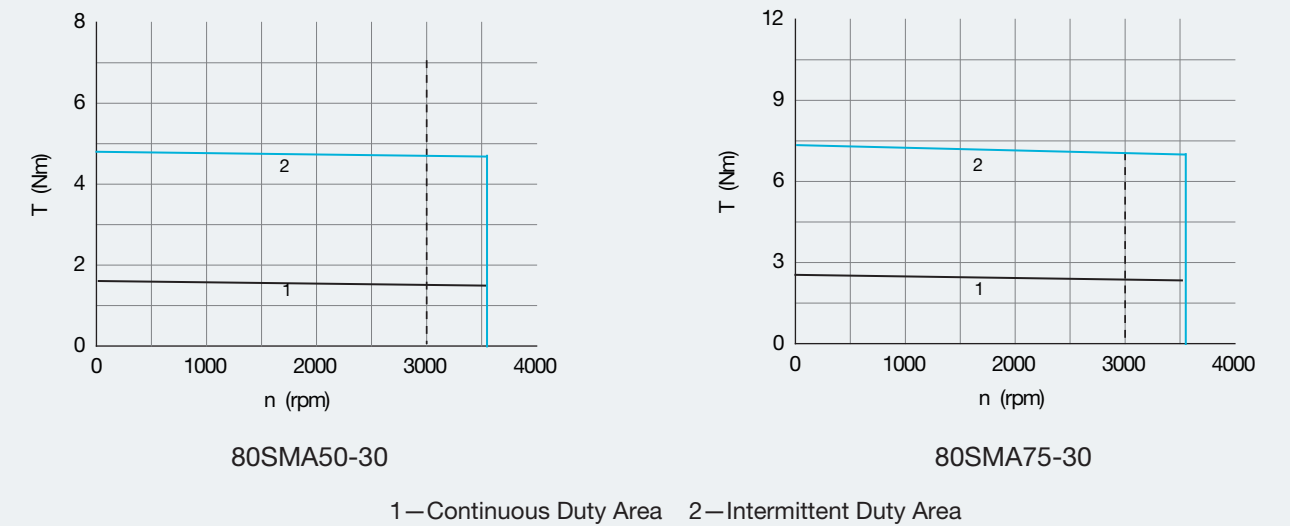
\*<sup>1</sup> Winding resistance is measured at 25°C,  $\pm 10\%$  tolerance.

\* Ratings with motor mounted to a 170×160×12mm aluminum plate for 80mm motor frames.

\* Optional feedback devices: resolver, increamtal / absolute encoder.

\* Optional terminations: flying leads, plastic/cannon connector.

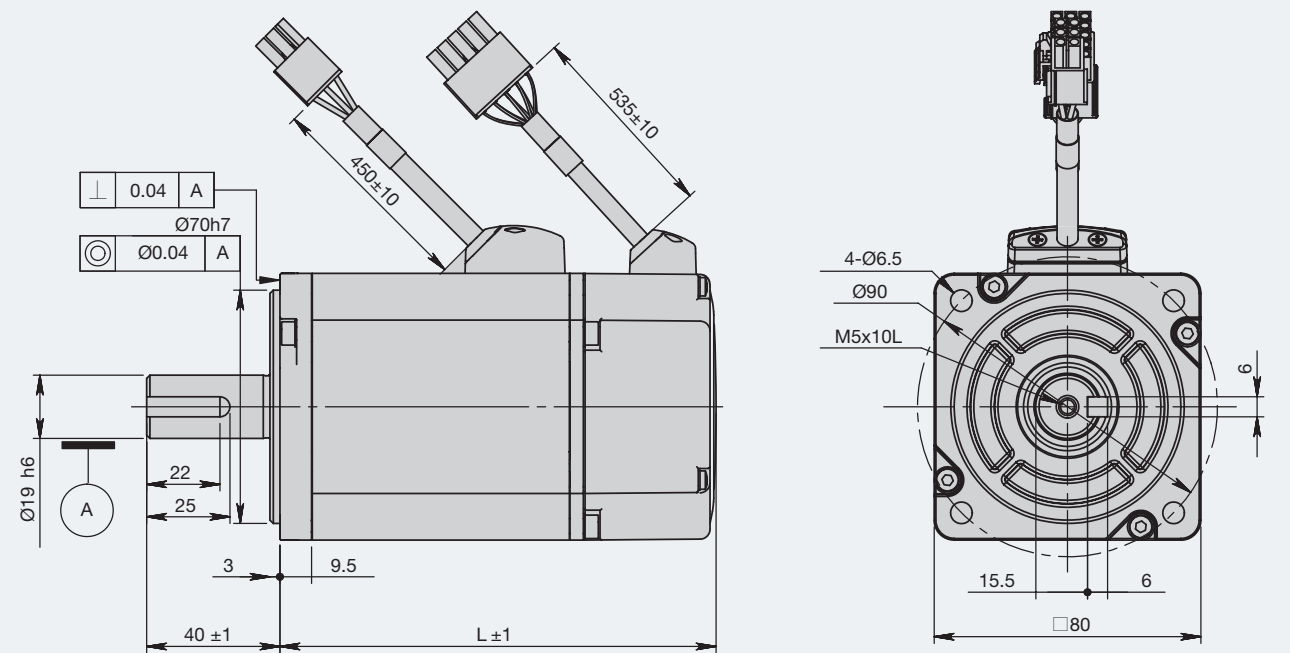
## ■ Torque vs. Speed Performance



## ■ Dimensions

MOTOR CONNECTOR:  
AMP HOUSING P/N: 172168-1  
AMP PINS P/N: 170360-1

ENCODER CONNECTOR:  
AMP HOUSING P/N: 172171-1  
AMP PINS P/N: 770835-1



Type	L
80SMA25-30	100.8
80SMA50-30	115.8
80SMA75-30	130.8
80SMA100-30	145.8