

# TORQUE MOTOR RM24-120-20-C-ES1



### Application:

Indexing tables and gimbals for mobile applications with battery supply.

### Construction:

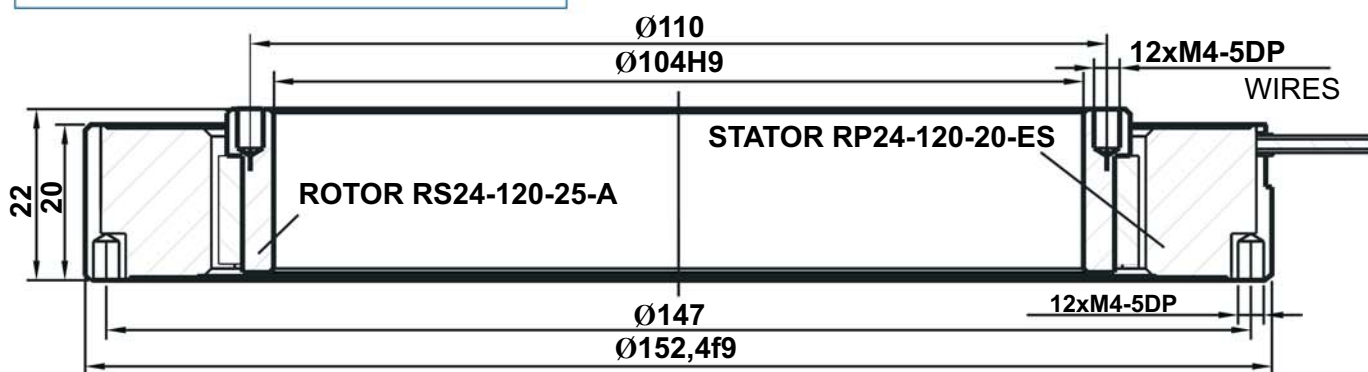
Motor consist of a fixed lamination stack with epoxy molded windings (stator) and rotated steel ring with glued permanent magnets (rotor).

User should install bearing and encoder.

Motor is compatible with standard servo controllers.

### Features:

- Iron-core three-phase rotary synchronous motor with rare-earth magnets for high force density;
- Direct drive (no gear, no backlash), small height 22 mm with big hollow shaft ( 104 mm ) ;
- Low weight 1,6kg, easy centering by fit diameters and mounting by thread holes.



Parameter	Unit	RM24-120-20-C...	
		-ES1	-ET1
Number of pole pairs		14	14
Peak torque Mp	Nm	12.4	12.4
Continuos torque Ma (coil at 120° C), air cooling	Nm	8.8	8.8
Peak current Ip at Mp	Arms	10.6	18.4
Continuos current Ia at Ma (coil at 120° C), air cooling	Arms	7.6	13.1
Inductance L	mH	1.0	0.3
Resistance R	Ohm	1.2	0.4
Maximum velocity Np at Mp and 28 VDC	rpm	56	259
Maximum velocity Na at Ma and 28 VDC	rpm	120	324
Inertia of rotor Jr	kg·m <sup>2</sup>	0.0014	0.0014
Rotor mass	kg	0.5	0.5
Stator mass	kg	1.1	1.1
Motor height	mm	20	20
Peak mechanical power Pmp	W	73	335
Torque constant Km	Nm/Arms	1.2	0.7
Attraction force radial Fr	N/mm	244	244
Max. attraction force axial Fa	N	1536	1536
Continuous electrical power Pea, air cooling	W	259	447
Continuous mechanical power Pma, air cooling	W	111	299
Peak electrical power Pep	W	379	704
Efficiency Ea at Ma and Us	%	43	67

### ORDER EXAMPLE:

**Stator RP24-120-20-C-ES1-3000-N0-A**, where **RP24**-type, **120**-inner diameter of stator, **20**-iron core height, **C**-air cooling, **E**-winding wire code, **S** or **T**-internal star or triangle connection, **1**-number of parallel coils, **3000**-stator wire length mm, **N0**-without motor connector (flying leads), **A**-wires radial.

**Rotor RS24-120-25-A**, where **RS24**-type, **120**-inner diameter of stator, **25**-magnet height, **A**- standard.