

## CL 40 Coreless DC motor

## 12 Watt

### Features

- No Iron loss; smooth speed
  - Smooth operation
  - Low inertia rotor, for rapid response
  - Special shafts
  - Encoder
  - Other supply voltages
  - Spur or planetary gearhead
  - Ball Bearings
- Options:**
- Connecting wires
  - Integrated EMI suppression
  - Tacho



**Allied Motion**  
Motion Solutions That Change the Game

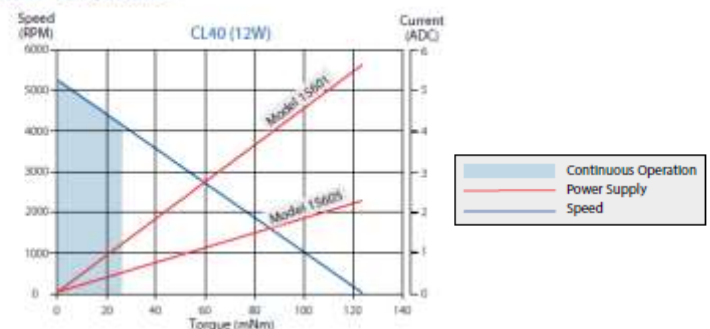
### Motor data

Motor order number	9904 120 15601	9904 120 15602	9904 120 15603	9904 120 15604	9904 120 15605	
Nominal voltage	12	15	18	24	30	V
Nominal torque	26	26	26	26	26	mNm
Nominal speed	4140	4090	4150	4170	4100	rpm
Nominal current	1250	980	830	630	490	mA
No load speed	5280	5180	5220	5280	5180	rpm
No load current max.	49	38	32	25	19	mA
EMF at 3000 rpm	6.76	8.62	10.3	13.5	17.2	V
Torque constant	21.5	27.4	32.6	43.0	54.9	mNm/A
Terminal resistance	2.1	3.3	4.6	8.3	13.1	Ω
Starting torque at nominal voltage	121	123	126	123	125	mNm
Starting current at nominal voltage	5.6	4.5	3.9	2.9	2.3	A
Rotor inductance	0.31	0.50	0.71	1.23	2.01	mH
Rotor moment of inertia	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	kgm <sup>2</sup>
Mechanical time constant	18	18	18	18	18	ms
Thermal resistance winding-housing	5.5	5.5	5.5	5.5	5.5	K/W
Thermal resistance housing-ambient	10.5	10.5	10.5	10.5	10.5	K/W

### General data

Type of bearings	sleeve + bearings	
Commutation system	graphite/copper	
Number of commutator segment	9	
Maximum radial load	5	N
Maximum axial load (static)	0.5	N
Ambient temp. range operating	-10/+60	°C
Ambient temp.	-40/+70	°C
Mass of motor	200	g

### CL40 (12W) - Performance



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