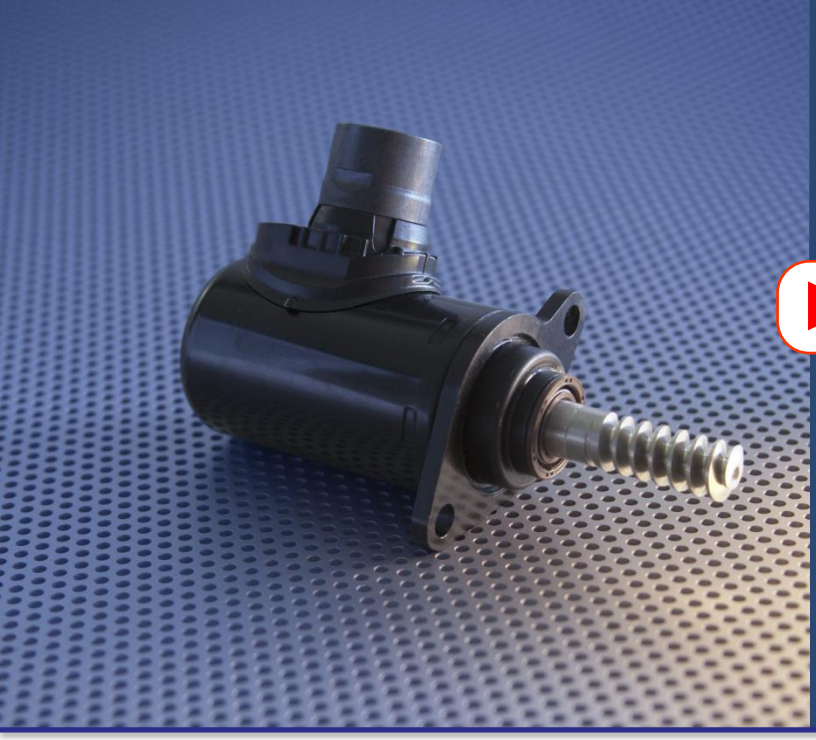

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▶ Brushless – DC Motors

5612R1004-P

- **Peak torque ..... 900 mNm @ 60A**
- **Resolution ..... < 0.1° at 0 speed**
- **Weight 515g**
- **Vector control compatible ..... Yes**
- **Redundant position sensor ..... Optional**

Compact, with integrated position sensor and high torque density are the main features of this BLDC motor. It is suitable for high temperature and high vibration applications.

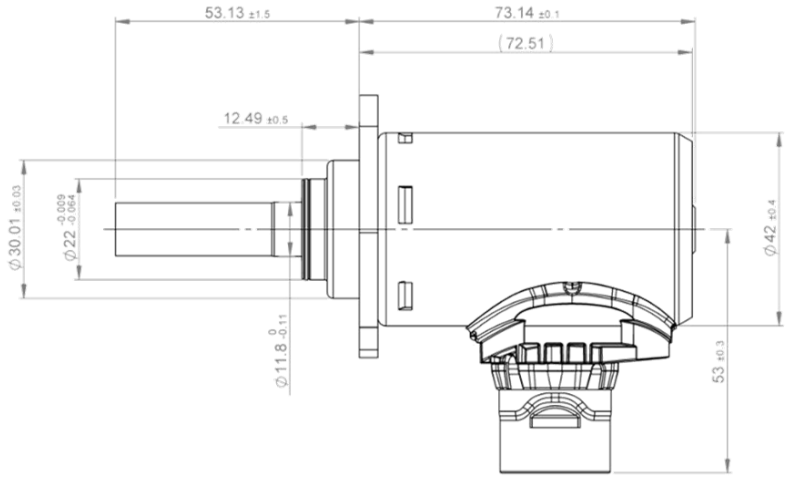
▶ Technical data

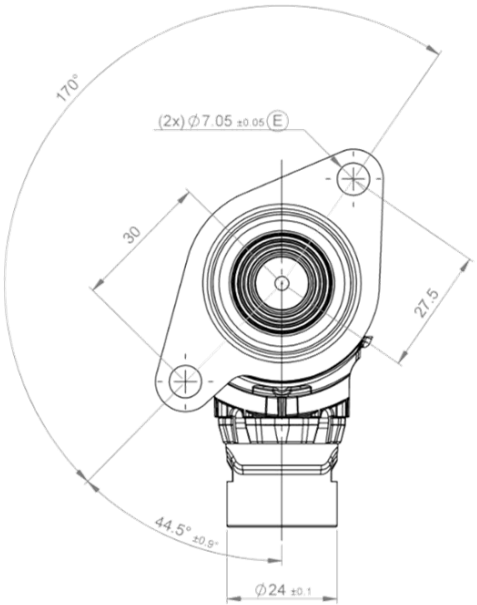
Weight	0.515	kg	**Detent Torque**	0-60	mNm
Phase Number	3-Δ	-	**Motor Constant**	58	$mNm/W^{1/2}$
Nomimal Voltage	12	V	**Torque Constant**	17.2	mNm/A
Phase Resistance	90	mΩ	**Continuous Stall Torque**	320	mNm
Phase Inductance	50	µH	**Max Static Torque**	900	mNm
Steps per revolution	30	-	**No Load Speed**	6500	rpm
Tightness	IP67 IP6K9K	-	**Rotor Inertia**	11	$Kg.mm^2$
Max Peak Current	60	A	**Sensors Nominal Voltage**	5	V

Nota: values at ambiant temperature

▶ Dimensions

Drawing not to scale. All dimensions in mm.

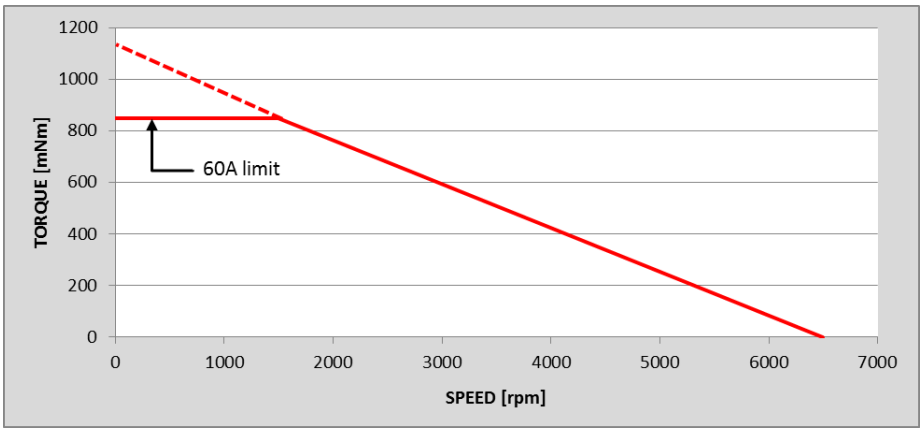




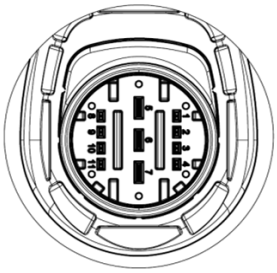
On demand: Output shaft design adaptation (diameter, toothing)

On demand: Different Front Flange orientations

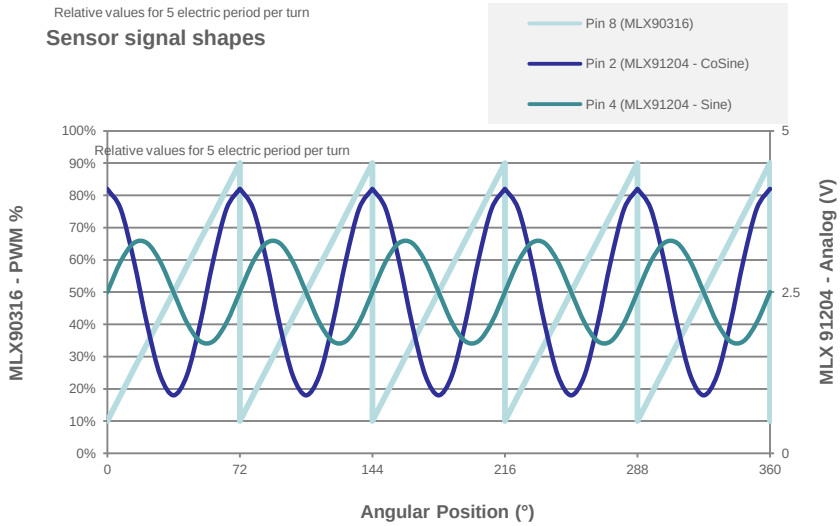
► Dynamic characteristics

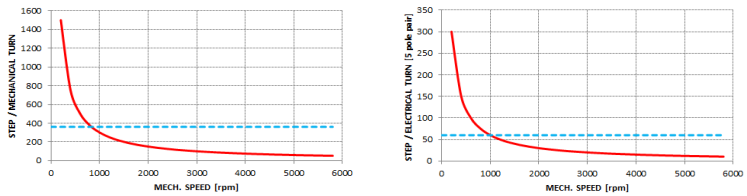


►Electrical Interface and step sequence



PIN Out - To be defined	
PIN	Config.
1	-
2	Y out (sine)
3	C out (~Vsupp/2)
4	X out (cosine)
5	W
6	V
7	U
8	Ang. Vout (PWM)
9	Supply 5V 91204
10	GND
11	Supply 5V 90316



	Resolution	Accuracy	Supply Voltage/Current	Output signal
Unit	°mech	°mech	V/A	-
Sensor#1 [MLX90316]	Speed dependant [12bits max] Probe high speed mode (sampling rate 200µs) 	±1.13	5V±0.5V / 13.5…16mA	PWM [From 100Hz to 1000Hz possible] [Push-Pull or Nmos]
Sensor#2 [MLX91204]	N/A Returns a sine and a cosine analog. The signal treatment by the customer will define the resolution of the sensor.		5V±0.5V / 16.5…19mA	Analog Voltage Range 0.5 … 4.5V

►Operating conditions

Temperature range ..... -40°C/140°C

Vibration level..... Up to 18g – bandwidth 0-2000Hz

Overall specifications depend on sensor options and driving duty cycles.
Special requirements upon customer specifications. Right to change without notifications reserved. *<3.0>*

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