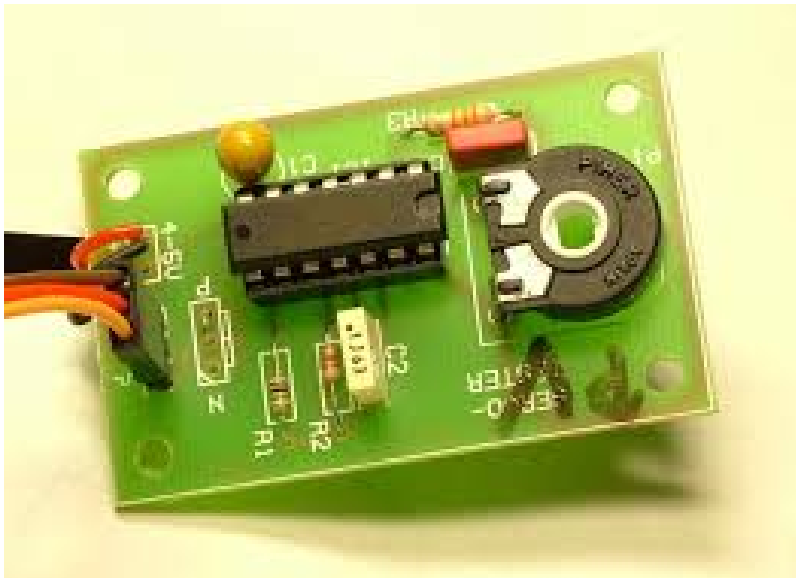
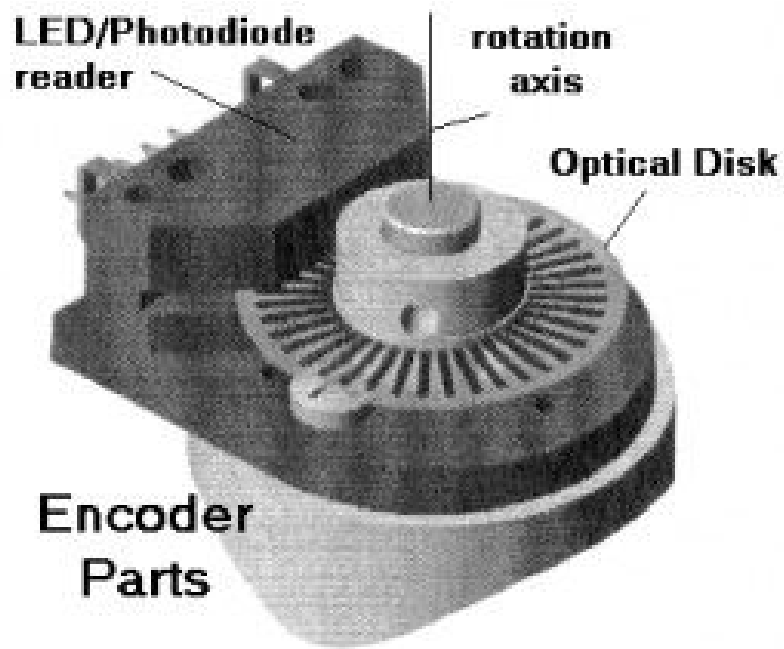


Servos: single and multi turn encoders

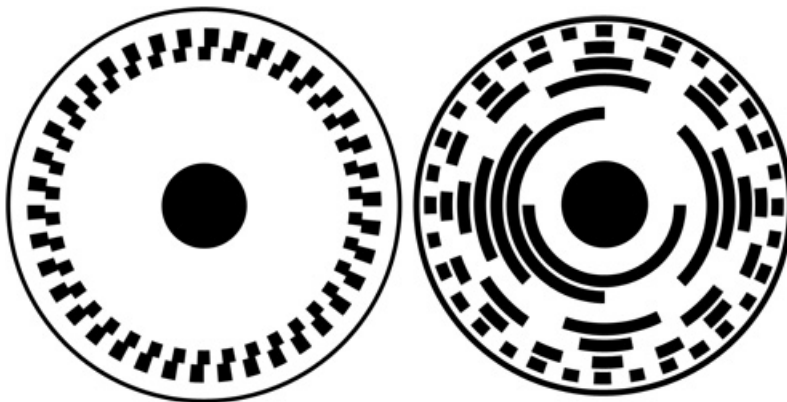
"Servo" is not a type of motor but a type of control!

A servomotor is a rotary actuator or linear actuator that allows for precise control of angular or linear position, velocity and acceleration. It consists of a suitable motor coupled to a sensor for position feedback. Wikipedia

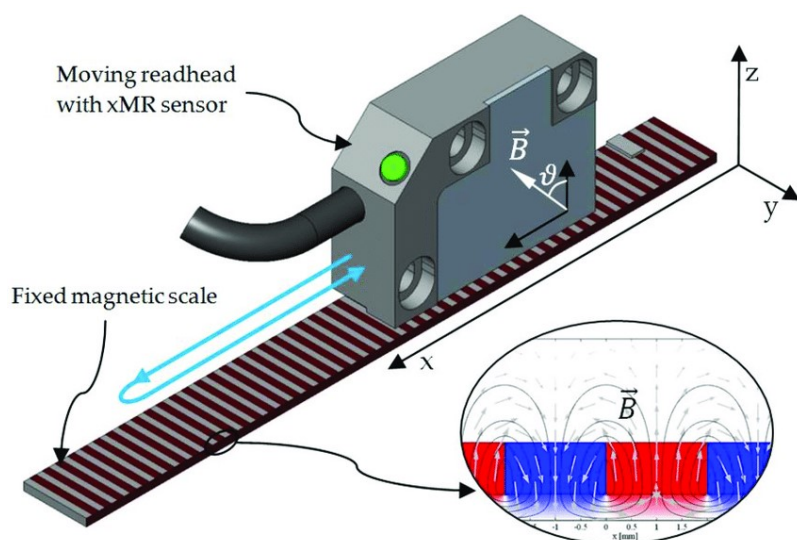
digital vs analog servo



relative/absolute



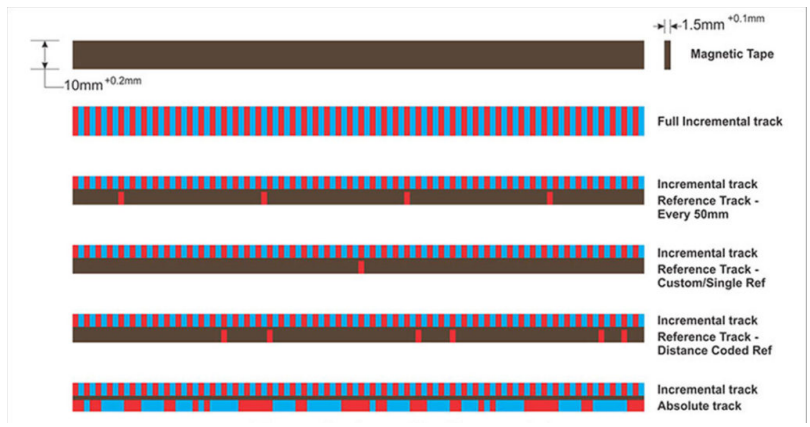
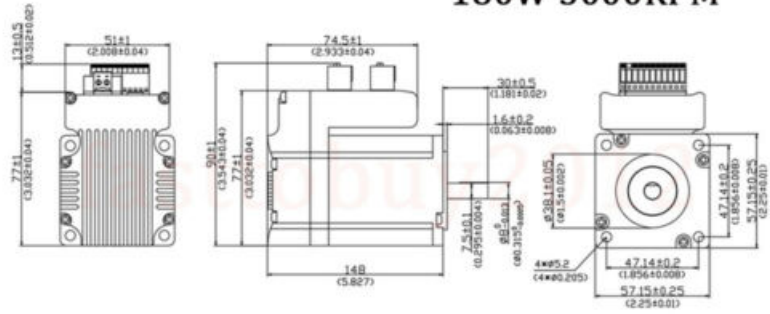
linear encoders





2 IN 1 Servo Motor Full Closed Loop

180W 3000RPM

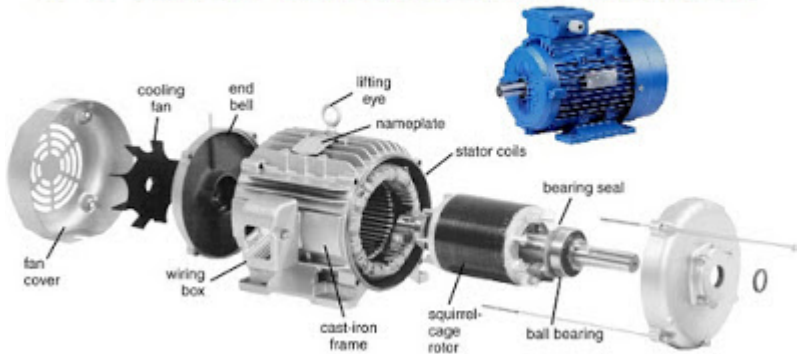


You could measure the "encoder" to know the position

3-phase induction motor



3 Phase Induction Motor





VFD Variable Frequency Drive

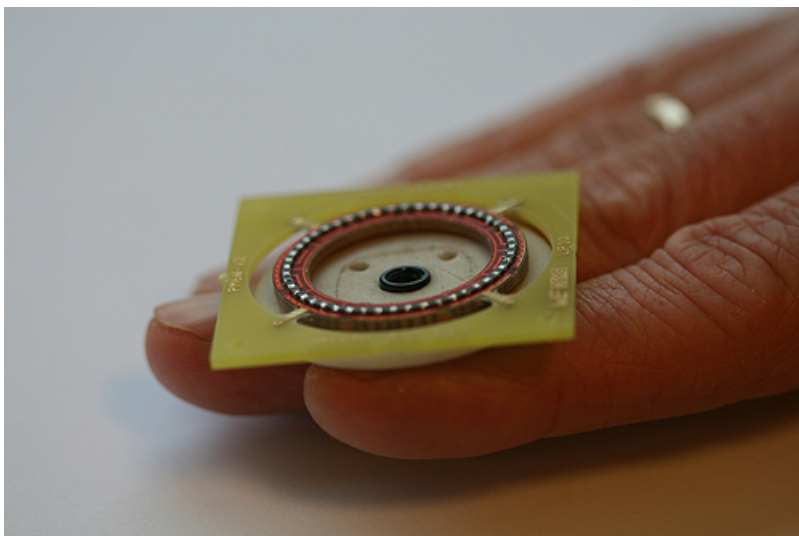
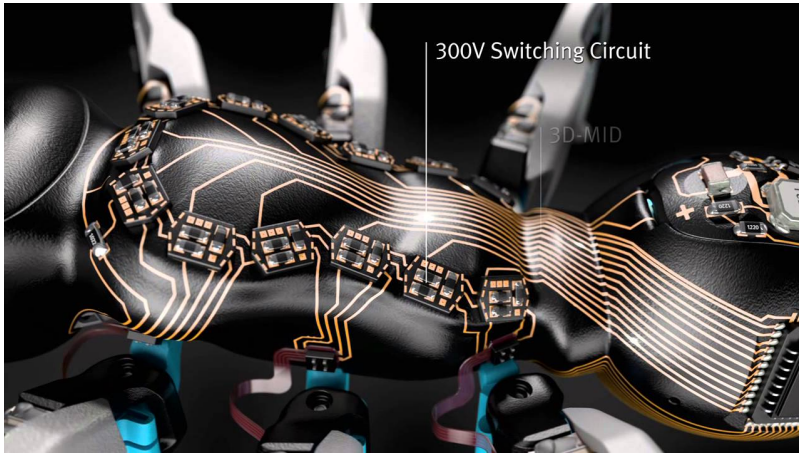


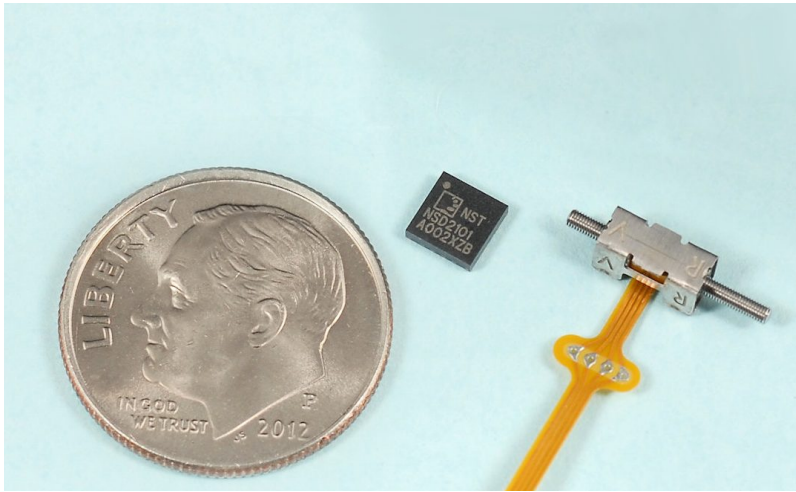
- 1 x 3KW ER20 Water-cooled spindle motor**
- 1 x 3KW 220V VFD Inverter 4HP**
- 1 x 2M Extension Cable**

**EU STOCK
FREE VAT**



piezo motors





https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=imgres&cd=&cad=rja&uact=8&ved=2ahUKEwjMz93O2e_oAhUJjqQKHWMjCXQQjB16BAgBEAM&url=https%3A%2F%2Fwww.newscaletech.com%2Fpr-new-scale-patents-piezoelectric-motor-drive-control-techniques%2F&psig=AOvVaw107_PCtiIFBUoE2rmPSZKI&ust=1587221091047649

blcdc driver

The BLDC PWM frequency is usually constant at >10 kHz
servo pwm-frequency = 50Hz 40 Hz to 200 H

atmega328 default 976 Hz on uno (250KHz up to 8MHz) Uno WiFi Rev.2 3, 5, 6, 9, 10 default: 976 Hz (61Hz.to 16Mhz?) Mega 2 - 13, 44 - 46 default: 490 Hz (pins 4 and 13: 980 Hz)

attiny default pwm = 55Hz to 32kHz [Ferdie Fabacademy](#)

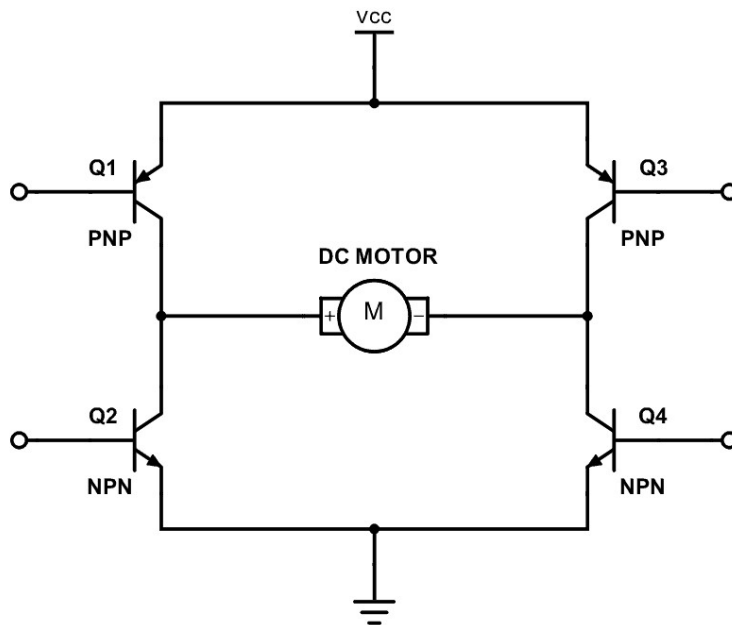
https://wiki.opensourceecology.org/wiki/3D_Printed_Electric_Motor

shape memory alloy

contact me if you want to know about this company in Kamp-Lintfort that produces a speial kind of shape memory alloy!

DC motor speed control

[neils class DC motor speed control](#)



Displays

Bitluni Brings All the ESP-32 Multimedia Hacks to Supercon

<https://youtu.be/AZYjIPrQe7s>