

Bipolaire Microstep Driver  
MSD-50-5.6

**Specifications:**

Power Supply

Minimum Voltage : 20 Vdc  
Maximum Voltage : 50 Vdc

Logic Signal Current minimal : 7 mA  
Logic Signal Current maximal : 16 mA

Maximum input frequentie : 400 KHz

Microsteps

Minimum number of microsteps : 2  
Maximum number of microsteps : 128

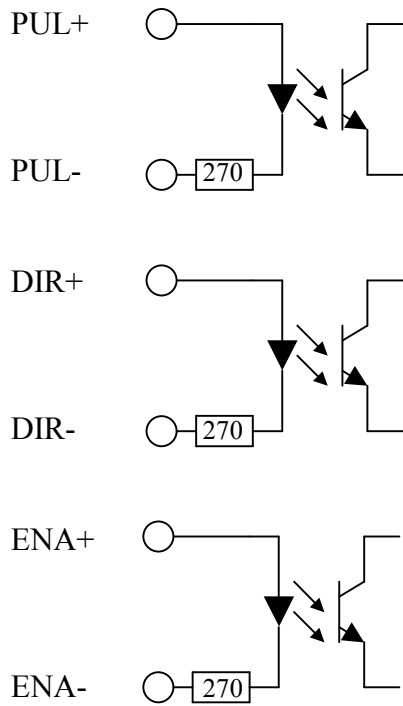
Number of Phases : 2

Steppermotor

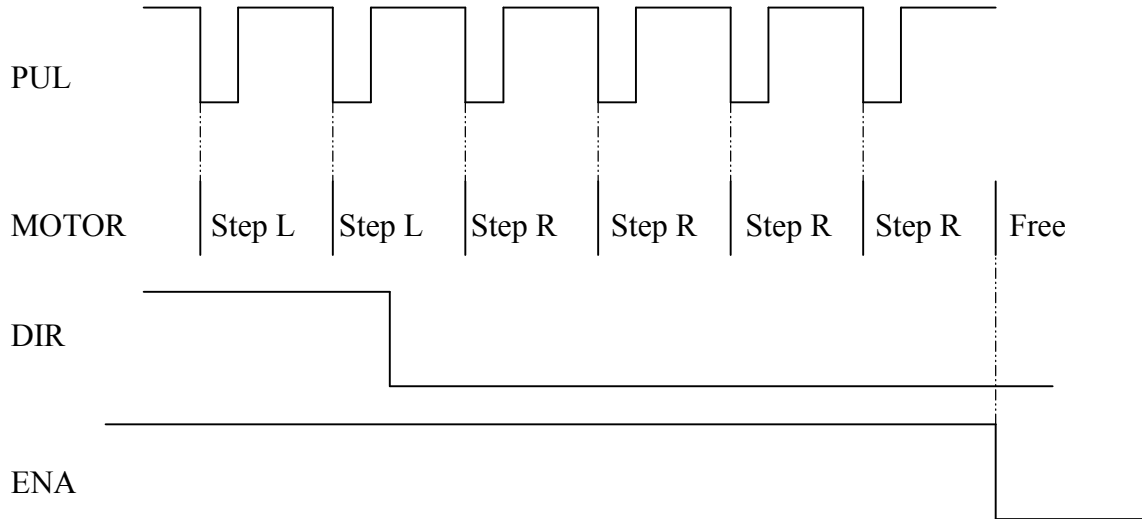
Minimum Phase Current : 1.0 A  
Maximum Phase Current : 5.6 A

Number of motorwires ( 2 phase ) : 4, 6, 8

### Optocouplers :



### Signals



Pulswidth min 1.4 uS

## Dipswitches

S1 S2 S3	Current	S1,S2,S3	Current
0 0 0	1.4 A	0 0 1	3.8 A
1 0 0	2.1 A	1 0 1	4.3 A
0 1 0	2.7 A	0 1 1	4.9 A
1 1 0	3.2 A	1 1 1	5.6A

S4 = 1 = Auto Current Reduction on

S4 = 0 = Auto Current Reduction off

S5 S6 S7 S8	microsteps	Step / Rotation	S5 S6 S7 S8	microsteps	Step / Rotation
			1 1 1 0	5	1000
0 1 1 1	2	400	0 1 1 0	10	2000
1 0 1 1	4	800	1 0 1 0	20	4000
0 0 1 1	8	1600	0 0 1 0	25	5000
1 1 0 1	16	3200	1 1 0 0	40	8000
0 1 0 1	32	6400	0 1 0 0	50	10000
1 0 0 1	64	12800	1 0 0 0	100	20000
0 0 0 1	128	25600	0 0 0 0	125	25000

0 = Off

1 = On

### Connections

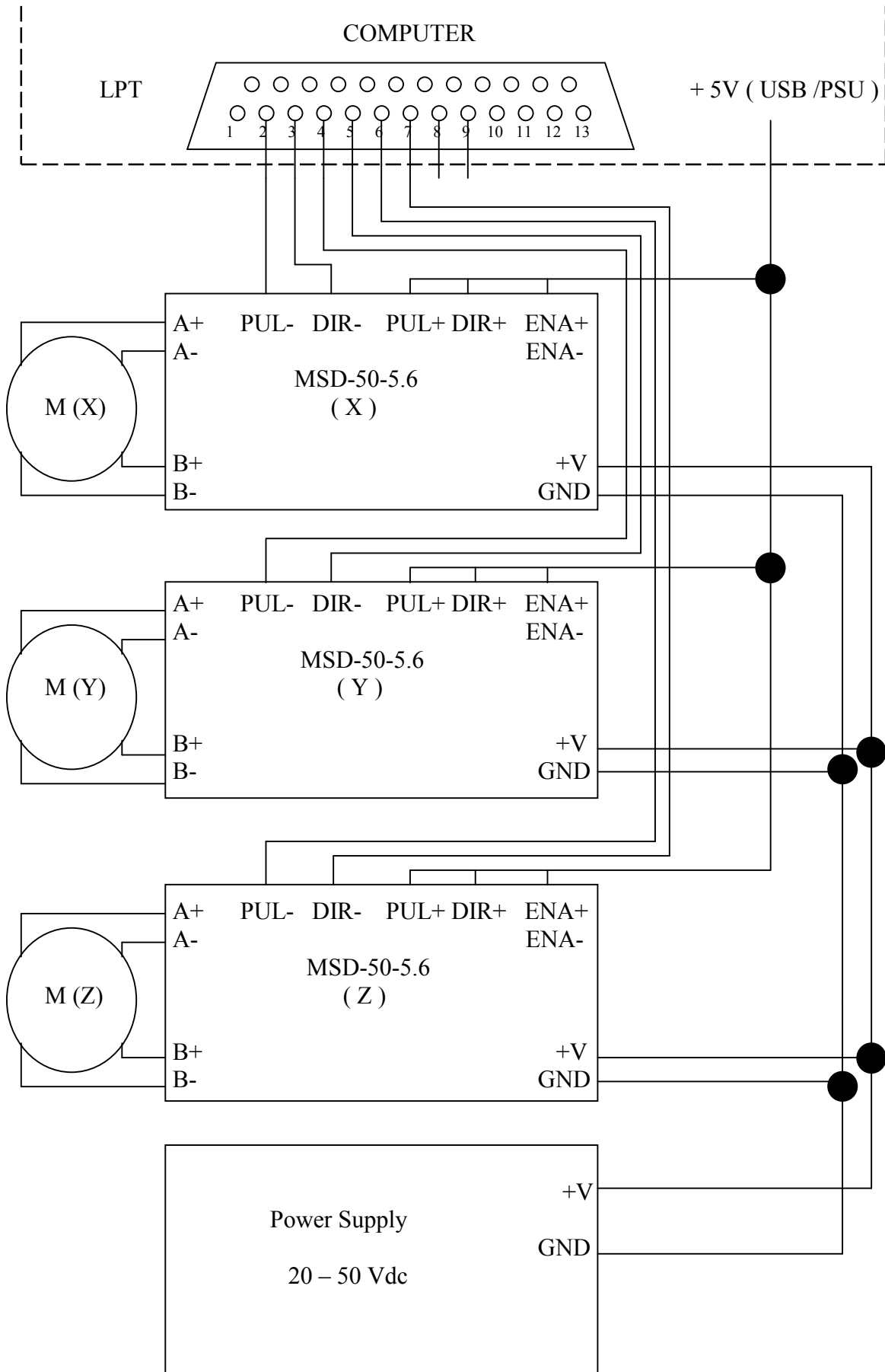
PUL+ : + 5 V  
 PUL- : STEP  
 DIR+ : + 5 V  
 DIR- : DIRECTION  
 ENA+ : + 5 V ( optional )  
 ENA : SWITCH ( optional )

+ V : Positive of Power Supply  
 GND : Negative of Power Supply ( or ground )

A+ : A connection of 1 phase of stepper motor  
 A- : A\ connection of 1 phase of stepper motor

B+ : B connection of 2 phase of stepper motor  
 B- : B\ connection of 2 phase of stepper motor

### Connection Example



## Standard Connections ( Example )

X-axes

PUL+ : + 5 V  
PUL- : LPT - 2  
DIR+ : + 5 V  
DIR- : LPT - 3  
ENA : NC

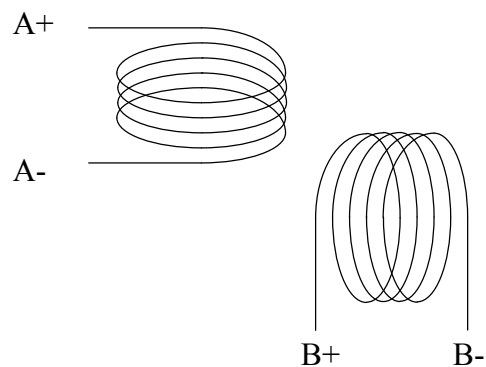
Y-axes

PUL+ : + 5 V  
PUL- : LPT - 4  
DIR+ : + 5 V  
DIR- : LPT - 5  
ENA : NC

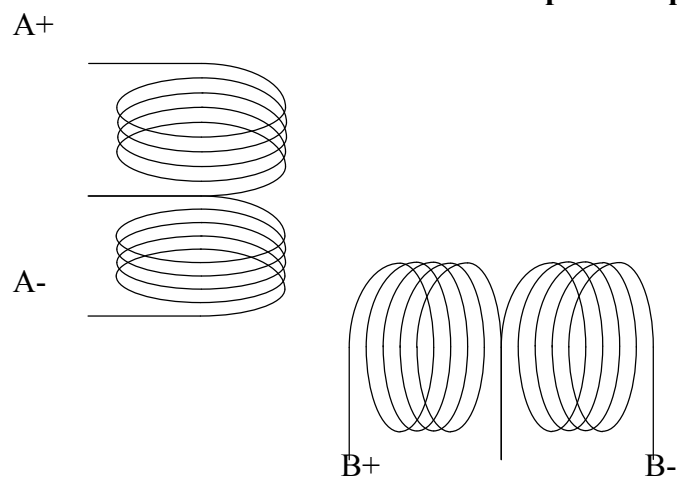
Z-axes

PUL+ : + 5 V  
DIR- : LPT - 6  
PUL+ : + 5 V  
DIR- : LPT - 7  
ENA : NC

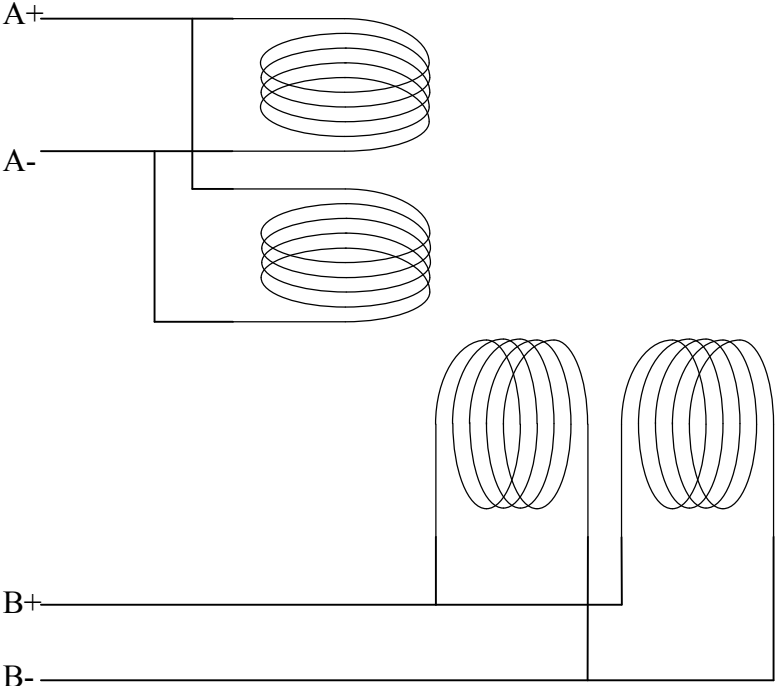
### 4 Wire 2 phase steppermotor



### 6 Wire 2 phase steppermotor



**8 Wire 2 phase steppermotor  
Parallel connected**

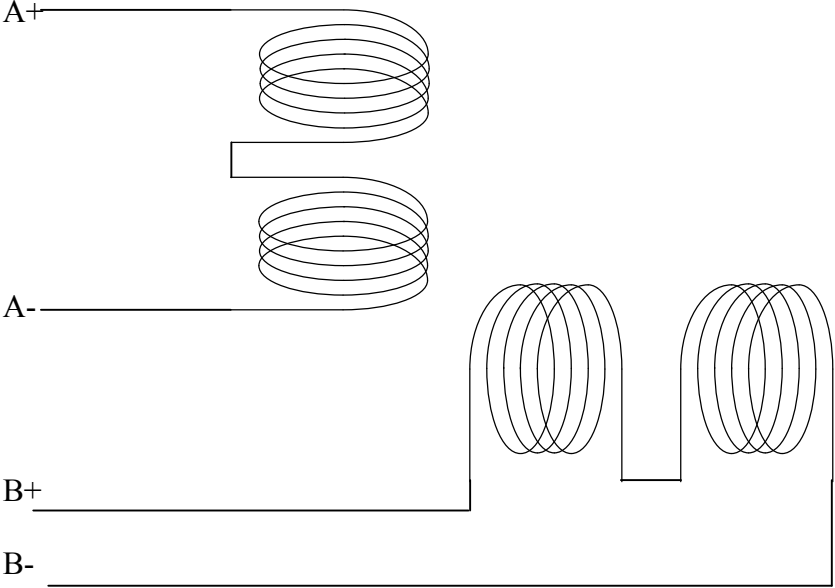


$I = 2 * I_{coil}$

$V = V_{coil}$

$H = H_{coil}$

**8 Wire 2 phase steppermotor  
Serial connected**



$I = I_{coil}$

$V = 2 * V_{coil}$

$H = 4 * H_{coil}$