High speed Galvo System

AT20 close-loop scanner

(PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLATION)

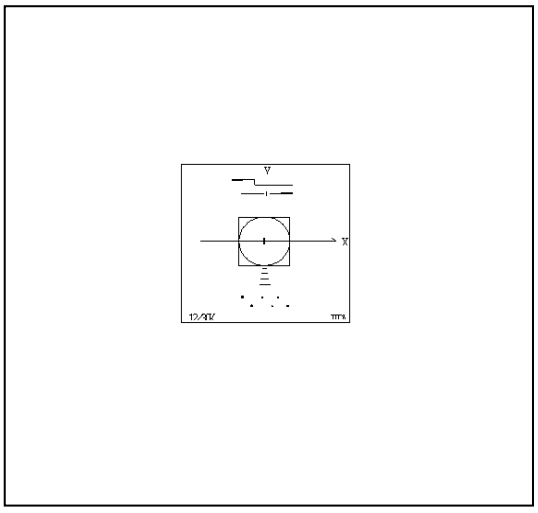
Technical Data:

- System:Closed Loop Moving Magnet Scanner
- Input resistance:200K ohms,differential
- Signal Input voltage: ±5V
- Input voltage requirements: +15V/1.0A, -15V/0.5A
- Operating temperature range:0～50 degrees C
- Optical angle: ±30° max
- Scanner speed:>20Kpps(30k ILDA testpattern , ±20° optical)
- Mirror dimensions WxL: 7mm*11mm*0.6mm (wide wave-length)
- Board size:8.0cm(long)*5.0cm(wide)*2.8cm(high)

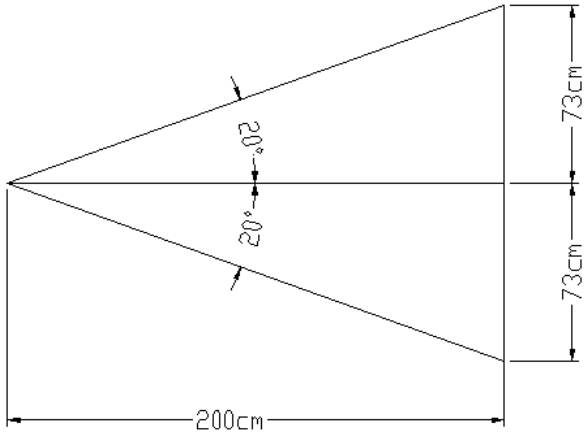
The measuring procedure

The AT20 was measured with PANGOLIN QM2000 card. Running at the desired output speed. Using the standard ILDA test pattern. Laboratory power supply at +/-15VDC,room temperature. Windows PC with Pangolin,12/30k ILDA testframe, full size. 7x11x0.6mm mirror was used during measuring period. The galvos is fixed in the standard mounts on an aluminmum baseplate, no forced cooling.

Delflection angle	Operating voltage	Speed@ Mirrors size
20 optical delfection	+/-15V	20Kpps @30k ILDA, 7*11*0.6mm
15 optical delfection	+/-15V	23Kpps @30k ILDA, 7*11*0.6 mm

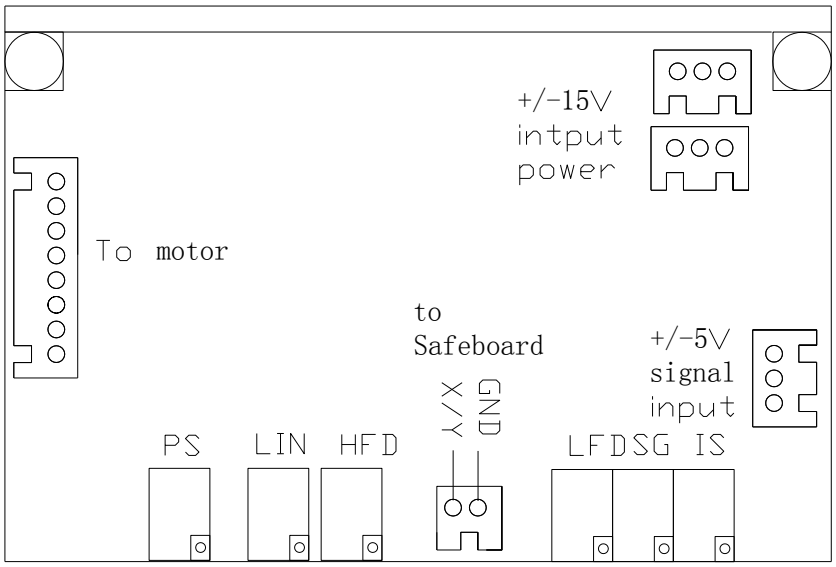


test pattern: ILDA/30K



angle: ±20°

Topview



Potentiometer description:

IS：Input scale

SG：Servo gain (power of the feedback signal for internal PID controller)

LFD：Low frequency damping (correct overshoot)

HFD：High frequency damping (correct undershoot)

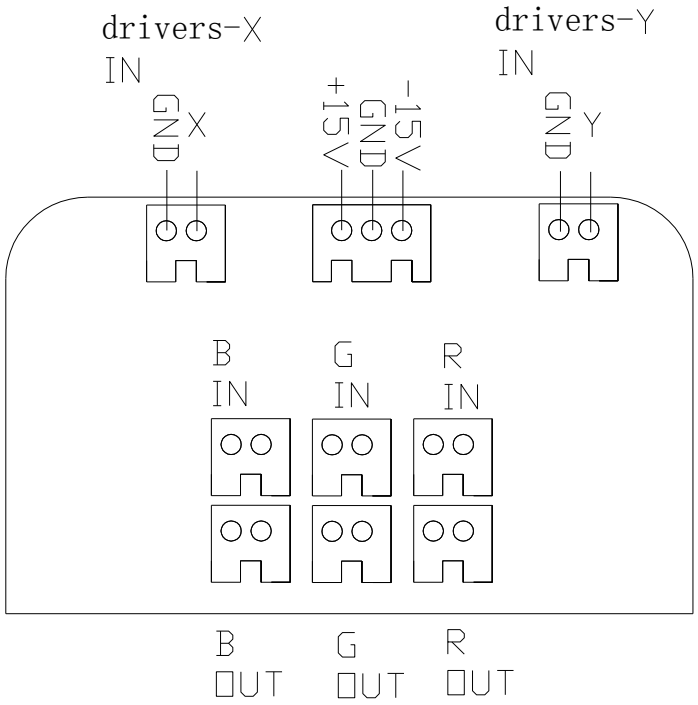
LIN：Zero offset (electrical offset of the driver, **adjusted only in factory**)

PS：Position scale (increase or decrease input sensitivity of the computer,**DO NOT change it**)

input connector

Power input			
XH-3 Connector pins	Description	Remark	Cable color
3	+VCC	+15V/1.0A	RED，24AWG
2	GND		BLACK，24AWG
1	-VEE	-15V/0.6A	WHITE，24AWG
Signal Input			
3	Control signal +	-5V~+5V anolog signal	
2	S-GND	Ground	
1	Control signal -	-5V~+5V anolog signal	

Safeboard



Laser Safeboard reference:

- Power supply: +/-15V@100mA.
- Signal monitor: feedbacks and control signals of XY Galvo position.
- Output: output 3 channels TTL signal to control laser, like RGB.
- Reacting time:100ms
- Safe Protected: motor system fault, driver fault and itself fault.
- Board size:6.0cm(long)*3.8cm(wide)