High speed Galvo System

RGB-SCAN20 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/0.6A
- Operating temperature range:0～50 degrees C
- Optical angle：±30° max
- Scanner speed:>20Kpps(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)

Laser Safeboard reference:

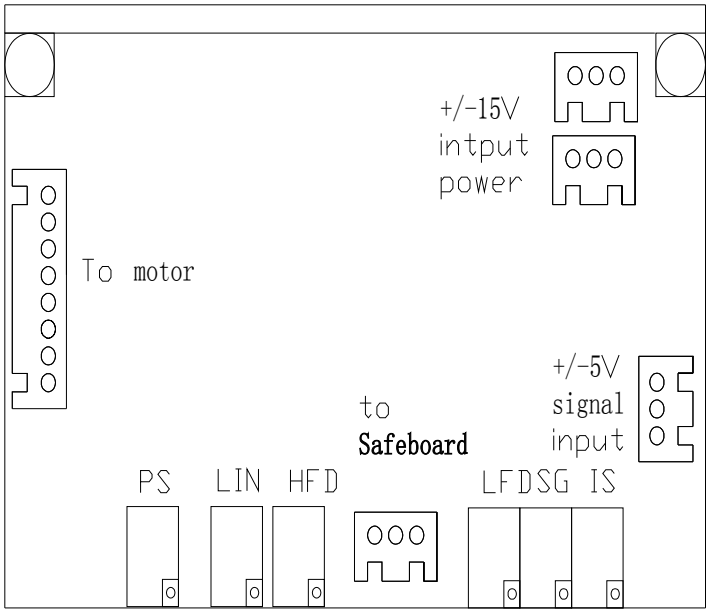
- Power supply: +/-15V@100mA.
- Signal monitor: feedbacks and control signals of XY Galvo position.
- Output: output 3 channels TTL signal to control laser, like RGB.
- Reacting time:100ms
- Safe Protected: motor system fault, driver fault and itself fault.
- Board size:6.0cm(long)*3.8cm(wide)

The measuring procedure

The RGB-SCAN20 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 @ 7*11*0.6
15 optical delfection	+/-15V	22Kpps @ 7*11*0.6
10 optical delfection	+/-15V	25Kpps @ 7*11*0.6
8 optical delfection	+/-15V	30Kpps @ 7*11*0.6
5 optical delfection	+/-15V	35Kpps @ 7*11*0.6

Topview



Potentiometer description:

- IS Input scale (adjusted only in factory)
- 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 (increases 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	