ScannerOptics
思特光学

ULTRASCAN II-GS
高速划线系列扫描头

光电系列 ULTRASCAN SERIES

最大扫描速度
大于240rad/s
Maximum scan speed
is greater than 240rad/s

全新的水冷设计
同时高效冷却电机和驱动
New water-cooling design
to cool motor and drive efficiently

最高承受3KW
光纤激光功率
Maximum 3KW
fiber laser power

精度高、长时间漂移
小于100μrad
High precision. Long term
drift is less than 100μrad

深圳市思特光学科技股份有限公司
Scanner Optics Co., Ltd.

www.scanneroptics.cn
NO. 2026-03

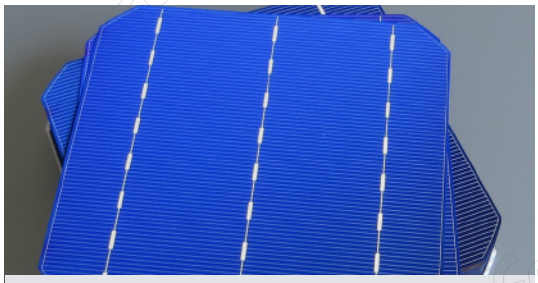
技术参数
TECHNICAL PARAMETERS

UltraScan II-GS	10mm	14mm	15mm	20mm	30mm
入射光斑直径 Input Beam Aperture (mm)	10	14	15	20	30
光柱位移 Beam Displacement (mm)	12.54	16.42	19.32	25.25	35.53
跟随误差 Tracking Error (ms)	0.12	0.19	0.20	0.30	0.40
重复精度 Repeatability (μrad)	<2	<2	<2	<2	<2
零位漂移 Offset Drift (μrad/K)	<12	<12	<12	<12	<12
增益漂移 Gain Drift (ppm/K)	<50	<50	<50	<50	<50
>8小时长时间漂移 Long-Term Drift over 8h (mrad)	<0.1	<0.1	<0.1	<0.1	<0.1
1%全行程 1% of full Travel (ms)	0.28	0.38	0.45	0.70	0.95
10%全行程 10% of full Travel (ms)	0.7	0.72	0.8	1.1	1.5
定位速度① Positioning Speed (rad/s)	200@±15V 240@±24V	200@±15V 240@±24V	200@±15V 220@±24V	130@±15V 180@±24V	70@±15V 100@±24V
扫描角度② Scan Angle (°)	±22				
增益误差 Gain Error (mrad)	<5				
零位误差 Offset Offset (mrad)	<5				
非线性度 Nonlinearity (%)	<0.2				
电源要求 Power Requirements	±15VDC-±24VDC, ≥10A				
通讯协议 Communication Protocol	16bit: XY2-100				
工作温度 Operation Temperature (°C)	25±10				
水冷要求 Typical Water Requirements	5l/min at △p<0.1 bar, p<4 bar				
重量 Weight (kg)	1.9	2.5	2.5	5.0	5.2

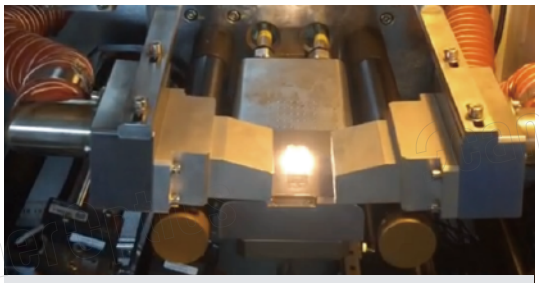
① 使用焦距F=160mm的场镜测试 Test using F-theta lens with focal length F=160mm

② 以上角度均为光学角度 All angles above are optical angles

行业应用
INDUSTRY APPLICATIONS



Topcon电池
Topcon Battery

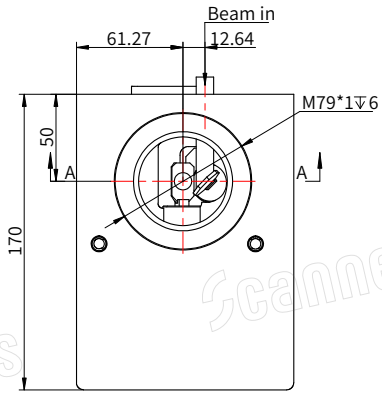


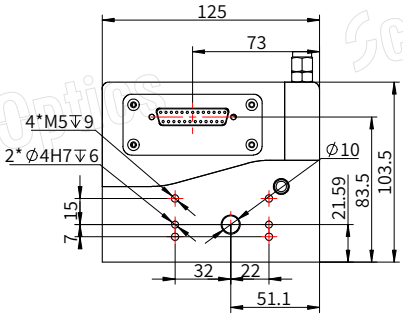
极片激光清洗
Electrode Laser Cleaning

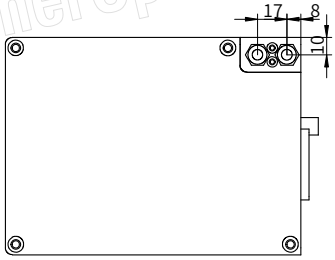
外形尺寸图

TECHNICAL DRAWING

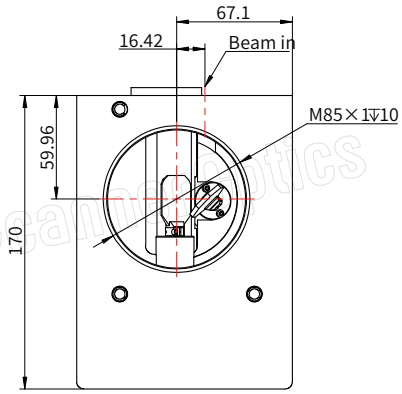
UltraScan II-GS 10mm

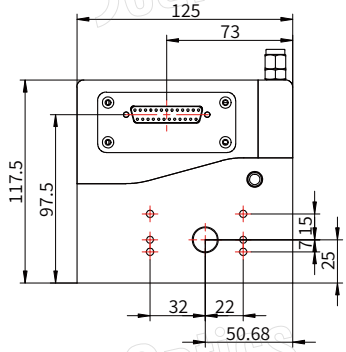


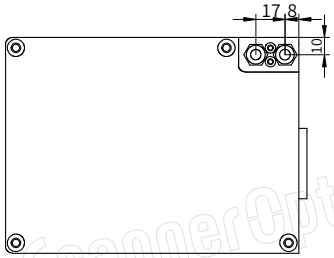




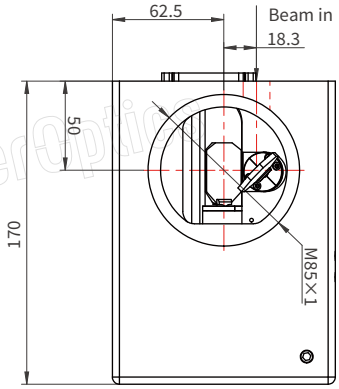
UltraScan II-GS 14mm

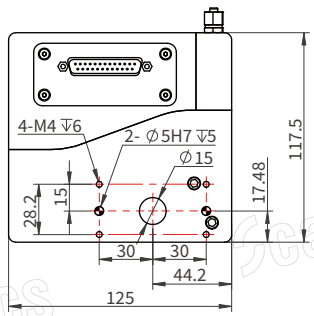


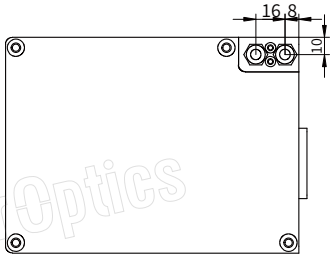




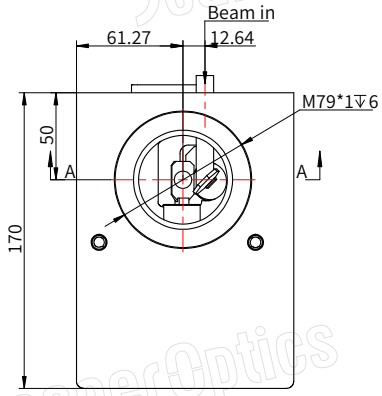
UltraScan II-GS 15mm

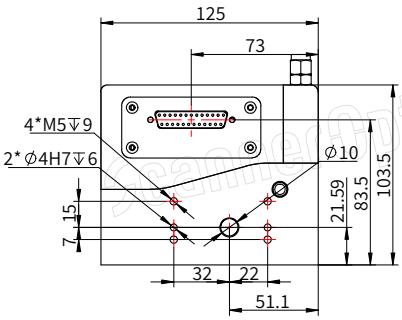


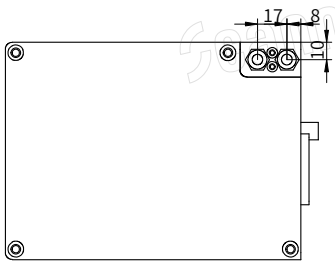




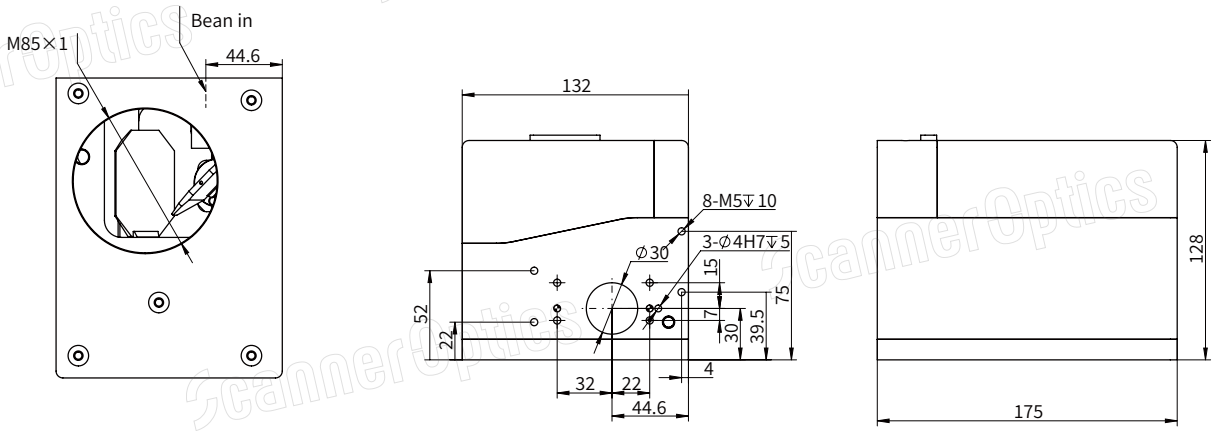
UltraScan II-GS 20mm







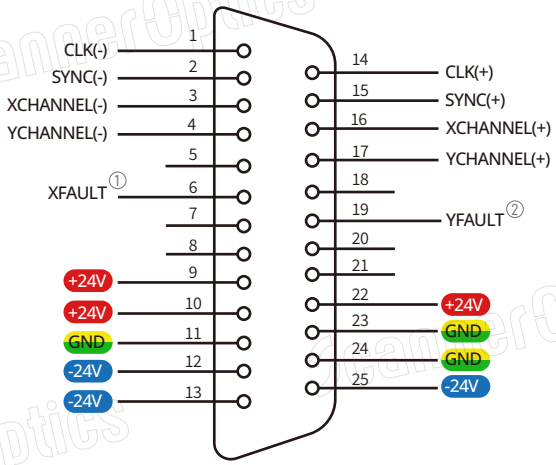
UltraScan II-GS 30mm



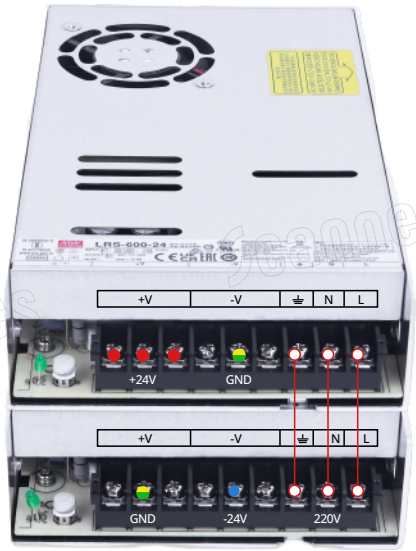
接线说明
WIRING INSTRUCTIONS

由于市场上缺乏±24V的开关电源，因此可以采用以下接线方式，通过两个24V单电源组合成±24V的开关电源。

Due to the lack of ±24V switching power supplies in the market, the following wiring method can be used to combine two 24V single-output power supplies into a ±24V switching power supply.



XY2-100通讯协议 Communication Protocol



①② **振镜异常报警信号 Galvanometer Abnormal Alarm Signal:**

在正常工作状态下，输出高电平12V；当发生报警时，输出低电平1V。
In normal operating conditions, the output is a high level of 12V. When an alarm occurs, the output is a low level of 1V.

当振镜供电电压低于±12V时，将触发供电电压报警。
When the supply voltage drops below ±12V, a supply voltage alarm will be triggered.

若振镜工作电流过大时，则会出现过大电流报警。建议工作速度应控制在规定的定位速度以内，平均电流应小于1A。
If the working current is too high, an excessive current alarm will be triggered. It is recommended to control the working speed within the specified positioning speed, and the average current should be less than 1A.

振镜标定的扫描角度为±22度光学角。当电机扫描角度达到或超过±26.4°光学角时，将触发位置超限报警。
The scanning angle is ±22°. When the scanning angle of motor reaches or exceeds ±26.4°, a position over-limit alarm will be triggered.

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