Office
China

Application Number
201811228369.2

Application Date
22.10.2018

Publication Number
109342763

Publication Date
15.02.2019

Publication Kind
A

IPC
G01P 5/26

CPC
G01P 5/26

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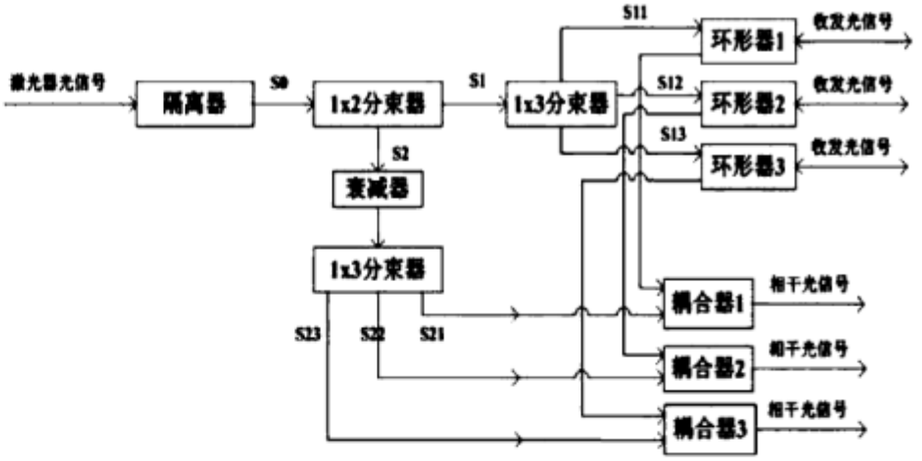
Title
[EN] All-fiber wind speed measuring system based on three-axis laser
[ZH] 一种基于三轴激光的全光纤风速测量系统



Abstract
[EN] The invention discloses an all-fiber wind speed measuring system based on the three-axis laser. A solver and three transceiver lenses are connected through a fiber flange interface. The solver provides functions of laser light source, optical signal transmission and processing, photoelectric conversion, electrical signal processing, parameter solving, and data transmission. The three transceiver lenses are mounted and fixed through a base. The form and angle of the base is designed according to different test requirements. The invention has the beneficial effects that three radial velocity vector measurements of a motion carrier relative to the air can be efficiently and accurately realized, thereby calculating the motion carrier speed and the running deflection angle.
[ZH] 本发明公开了一种基于三轴激光的全光纤风速测量系统，解算器和三个收发镜头之间通过光纤法兰盘接口进行连接。解算器提供激光光源、光信号传输与处理、光电转换、电信号处理、参数解算以及数据传输功能。三个收发镜头通过底座进行安装固定，底座的形式和夹角角度将根据不同试验要求进行设计。本发明的有益效果是能够高效准确的实现运动载体相对空气的三个径向速度矢量测量，进而解算出运动载体速度和运行偏转角度。