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(54) Title (EN): MULTI-LINE LASER RADAR

(54) Title (FR): RADAR LASER À LIGNES MULTIPLES

(54) Title (ZH): 多线激光雷达

(57) Abstract:

(EN): A multi-line laser radar (1). The multi-line laser radar (1) comprises: a multi-line ranging laser emission module (110) comprising one or more lasers (112); a multi-line ranging laser reception module (120) comprising one or more photodetectors and designed to be adapted to detect a laser echo generated when a measurement laser emitted by the laser emission module (110) is incident to an obstacle (Z) and is diffusely reflected; a ranging information resolution module in electrical signal connection with the multi-line ranging laser emission module (110) and the multi-line ranging laser reception module (120), and designed to calculate the distance, in each direction, to the obstacle (Z) by means of calculating the time difference between the emission of the measurement laser and the receiving of the laser echo; and a control circuit and an optical system correspondingly configured for the multi-line ranging laser emission module (110) and the multi-line ranging laser reception module (120).

(FR): L'invention concerne un radar laser à lignes multiples (1). Le radar laser à lignes multiples (1) comprend : un module d'émission laser de télémétrie à lignes multiples (110) comprenant un ou plusieurs lasers (112) ; un module de réception laser de télémétrie à lignes multiples (120) comprenant un ou plusieurs photodétecteurs et conçu pour être adapté à détecter un écho laser généré lorsqu'un laser de mesure émis par le module d'émission laser (110) est incident vers un obstacle (Z) et est réfléchi de manière diffusée ; un module de résolution d'informations de télémétrie en connexion de signal électrique avec le module d'émission laser de télémétrie à lignes multiples (110) et le module de réception laser de télémétrie à lignes multiples (120), et conçu pour calculer la distance, dans chaque direction, vers l'obstacle (Z) par le calcul de la différence temporelle entre

l'émission du laser de mesure et la réception de l'écho laser ; et un circuit de commande et un système optique conçus de manière correspondante pour le module d'émission laser de télémétrie à lignes multiples (110) et le module de réception laser de télémétrie à lignes multiples (120).

(ZH): 一种多线激光雷达(1),多线激光雷达(1)包括:多线测距激光发射模块(110),其包括一个或多个激光器(112);多线测距激光接收模块(120),其包括一个或多个光电探测器且设计为适于检测激光发射模块(110)发射出的测量激光入射到障碍物(Z)上发生漫反射的激光回波;测距信息解算模块,其与多线测距激光发射模块(110)以及多线测距激光接收模块(120)具有电信号连接,被设计为通过计算发射测量激光以及接收到激光回波的时间差计算出各方向上障碍物(Z)的距离;以及为多线测距激光发射模块(110)和多线测距激光接收模块(120)对应配设的控制电路和光学系统。

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