

## ZRL 系列智能双线分配器

### ZRL series intelligent two-line distributor

#### 一、 产品简介-Product introduction

ZRL 系列智能双线分配器是 ZR1601-Web 型无线智能润滑系统的润滑脂加注执行器，负责把油脂准确及时的送到每个润滑点，同时和润滑泵的控制系统以及无线基站联动工作，把自身安装环境的温度、角度、信号值、内部动作状态等信息无线发送给服务器软件平台储存和分析。每个润滑点的精确供油都需要分配器来执行，所以分配器的质量和功能直接关系到系统的运行效率。

The ZRL series intelligent dual-line distributor is the grease filling actuator of the ZR1601-Web wireless intelligent lubrication system. It is responsible for delivering the grease to each lubrication point accurately and timely, and works in conjunction with the control system of the lubrication pump and the wireless base station. Wirelessly send information such as the temperature, angle, signal value, and internal action status of its own installation environment to the server software platform for storage and analysis. The precise oil supply of each lubrication point requires a distributor, so the quality and function of the distributor are directly related to the operating efficiency of the system.

#### 二、 基本参数- Basic parameters

耐压等级- Withstand voltage rating:  $\leq 40\text{Mpa}$

适用润滑脂粘度- Applicable grease viscosity: 0#—3#

最小开启压力- Minimum opening pressure: 2Mpa

工作温度- Working temperature:  $-30^{\circ}\text{C}$ — $+100^{\circ}\text{C}$

防护等级- Protection level: IP68

密封要求- Sealing requirements:

在长期40Mpa 以下工作环境本体漏油点低于2%

In the long-term working environment below 40Mpa, the oil leakage point of the distributor is less than 2%

表面处理- Surface treatment:

选用铝合金材质时，采用特氟龙喷涂耐腐蚀技术，潮湿环境使用6个月本体腐蚀深度 $\leq$



1mm

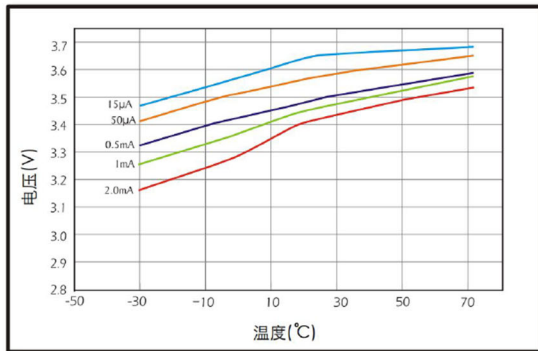
Teflon spray corrosion technology, humid environment for 6 months corrosion depth body

≤1mm

电池使用寿命- Battery life: 20°C ≥18 个月 months, 80°C ≥8 个月 months (详细数据见下图 see the figure below for detailed data)

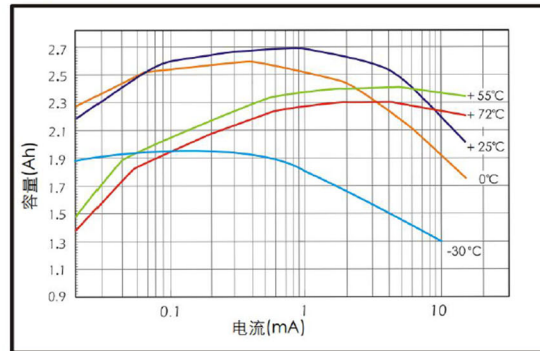
在不同放电电流和温度下的平稳电压曲线图

Smooth voltage curve graph under different discharge current and temperature conditions



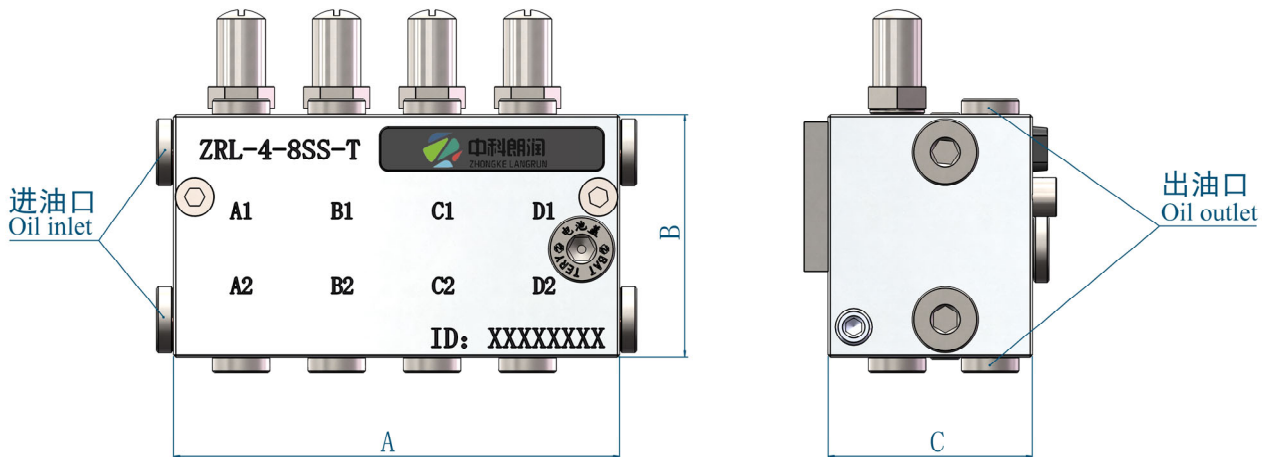
在不同温度和电流条件下的容量曲线图(截止电压为 2.0V)

Capacity curve diagram under different temperature and current conditions (cut-off voltage is 2.0V)



### 三、 产品尺寸及选型参考- Product size and selection reference

型号 mode	出油口数 oil outlets	外形 Overall dimensions (mm)			进油口螺 纹 Thread size of oil inlet	出油口螺 纹 Thread size of oil outlet	单次给油 量 Single amount of oil	备注 Remarks	
		A	B	C					
ZRL-2-4SS	4	84.9	81	68	G3/8	G1/4	2.5 ml	不锈钢 材质	
ZRL-3-6SS	6	116.7							
ZRL-4-8 SS	8	148.5							
ZRL-2-4SS-T	4	84.9					1.5ml		不锈钢 材质
ZRL-3-6 SS-T	6	116.7							
ZRL-4-8 SS-T	8	148.5							



ZRLSS系列分配器（不锈钢款）

#### 四、分配器功能描述- Distributor function description

1、分配器工作类型为无线传输双线式，采用磁力传感器监测内部活塞的工作原理工作，通过油压交替工作；

The working type of the distributor is a wireless transmission two-wire type, using a magnetic sensor to monitor the working principle of the internal piston, and it works alternately through oil pressure;

2、分配器的供油量监测采用容积式计量，计量准确度高且不受压力影响；

The fuel supply monitoring of the distributor adopts volumetric metering, with high measurement accuracy and not affected by pressure;

3、分配器的所有通道传感器实时在线，任何一个活塞的动作都要立刻上报动作方向和动作程度；

All channel sensors of the distributor are online in real time, and any piston movement must immediately report the movement direction and degree of movement;

4、服务器软件平台通过计算标注分配器各出油口的加注压力，软件系统可以生成趋势图，可以在设定预警值的情况下提供故障预报警信息；

The server software platform calculates and marks the filling pressure of each outlet of the distributor, and the software system can generate a trend graph, which can provide failure pre-alarm information under the condition of setting the early warning value;

5、分配器所有的数据采集均通过无线的方式传输到监控系统，杜绝大量布线对主设备的运转产生影响；

All data collection of the distributor is transmitted to the monitoring system by wireless means, to prevent a large amount of wiring from affecting the operation of the main equipment;

6、分配器需具有环境温度，湿度等自检测功能，针对现场高温、粉尘、喷淋水环境保护等级要达到第三方认证的静态IP68、动态IP66，可以实现长期淋水或浅水浸泡正常工作；

The distributor must have self-detection functions such as ambient temperature and humidity, and the protection level for the on-site high temperature, dust, and spray water environment must reach the third-party certified static IP68 and dynamic IP66, which can achieve long-term water or shallow water immersion and normal work;

7、软件平台通过分配器上报数据实现全部供油点的供油数据详细记录，包括单点次数、油量、卡阻、回弹；

The software platform realizes detailed records of the fuel supply data of all fuel supply points through the data reported by the distributor, including the number of single points, fuel volume, jamming, and rebound;

8、软件平台对应分配器的故障信息应分类记录：卡阻、回弹、温度、湿度、检测、通讯状态；

The fault information of the software platform corresponding to the distributor should be classified and recorded: jam, rebound, temperature, humidity, detection, communication status;

9、分配器配备现场点检目测指示杆，指示杆采用磁感式，杜绝传统橡胶密封式指示杆的漏油现象，改善现场环境，降低火灾隐患，减少漏油对现场环境和设备的污染。

The distributor needs to be equipped with an on-site visual inspection indicator rod. The indicator rod adopts a magnetic induction type to prevent the oil leakage of the traditional rubber-sealed indicator rod, improve the on-site environment, reduce fire hazards, and reduce the pollution of the on-site environment and equipment by oil leakage.