

# MXS-3Kg 智能型免维护吸湿器

## MXS-3Kg Intelligent Maintenance-Free Hygrostat

### 一. 产品简介(Product introduction)

MXS 智能型免维护吸湿器是用于油浸式变压器、互感器、有载分接开关或其他电气设备所使用储油柜的管路中，用于净化和除去进入储油柜的空气中水分和灰尘，以保证变压器油的清洁和绝缘强度。

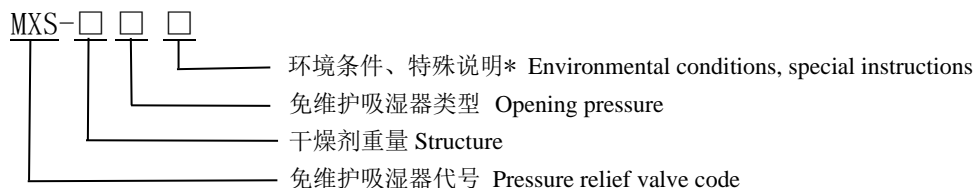
当变压器由于负荷或环境温度的变化而使变压器油的体积发生胀缩，迫使储油柜内的气体通过免维护吸湿器的金属过滤网和干燥剂进行呼吸时，清楚了进入的空气中的杂物和潮气，从而保持了变压器油的绝缘强度。并且当长时间使用后，干燥剂受潮达到预设的相对湿度值时，免维护吸湿器启动加热干燥功能，自动去除干燥剂中的水分，使干燥剂吸湿能力恢复，可循环使用，达到吸湿器免维护的目的。

The MXS intelligent maintenance-free desiccator is installed in the pipelines of oil-filled transformers, transformers, on-load tap changers, or other electrical equipment's oil storage tanks. It is used to purify and remove the moisture and dust in the air that enters the oil storage tank, ensuring the cleanliness and insulation strength of the transformer oil.

When the volume of transformer oil changes due to load or environmental temperature variations, causing the oil to expand or contract, the gas in the conservator is forced to breathe through the maintenance-free breather's metal filter and desiccant. This process removes impurities and moisture from the incoming air, maintaining the insulation strength of the transformer oil. Moreover, after long-term use, when the desiccant becomes saturated with moisture to a preset relative humidity level, the maintenance-free breather activates its heating and drying function to automatically remove the moisture from the desiccant, restoring its moisture-absorbing capacity and allowing it to be reused, thus achieving the goal of maintenance-free operation for the breather.

### 二. 型号、规格、结构、特点(Model, specification, structure, characteristics)

#### 2.1、型号及说明(Model and description)



\*说明：MXS-表示免维护吸湿器，3KG-表示干燥剂重量，LT-表示用于寒冷地区。

\*Description: MXS - indicates maintenance-free desiccator, 3KG - indicates the weight of the desiccant, LT - indicates for cold regions.

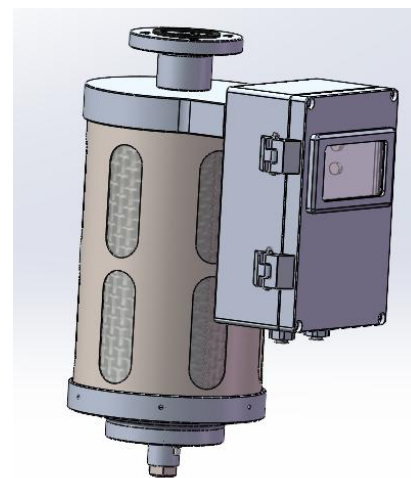
标注实例：MXS-3Kg，表示为：3Kg 免维护吸湿器适应于一般地区。

The MXS-3Kg, denoted as: 3Kg maintenance-free moisture absorber, is suitable for general areas.

#### 2.2、主要技术参数及性能(Main technical parameters and performance):

2.2.1. 适应范围：一般地区和湿热地区；

Application scope: General areas and humid hot regions;



2.2.2. 环境要求:  $-30^{\circ}\text{C}\sim+70^{\circ}\text{C}$ ;

Environmental requirements:  $-30^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ ;

2.2.3. 吸湿材料: 无色硅胶;

Absorbent material: Colorless silica gel;

2.2.4. 防护等级: IP55;

Protection level: IP55;

2.2.5. 控制系统电源: AC 220/230V 50/60Hz ;

Control system power supply: AC 220/230V 50/60Hz;

2.2.6. 干燥剂重量: 1.5Kg, 3Kg, 5Kg, 10Kg;

Drying agent weight: 1.5Kg, 3Kg, 5Kg, 10Kg;

2.2.7. 通讯方式: RS485;

Communication method: RS485;

2.2.8. 呼吸力:  $\leq 50\text{KPa}$ ;

Breathing force:  $\leq 50\text{KPa}$ ;

2.2.9. 加热器功率:  $3\text{Kg}\leq 500\text{W}$ ;

Heater power:  $3\text{Kg}\leq 500\text{W}$ ;

2.2.10. 通气阻力:  $\leq 0.005\text{MPa}$ ;

Ventilation resistance:  $\leq 0.005\text{MPa}$ ;

**2.3、外形及安装尺寸图(Shape and installation dimension drawing)**

2.3.1、MXS-3Kg 免维护吸湿器外形尺寸图见图 2;

2.3.1、The external dimensions diagram of the MXS-3Kg maintenance-free moisture absorber is shown in Figure 2;

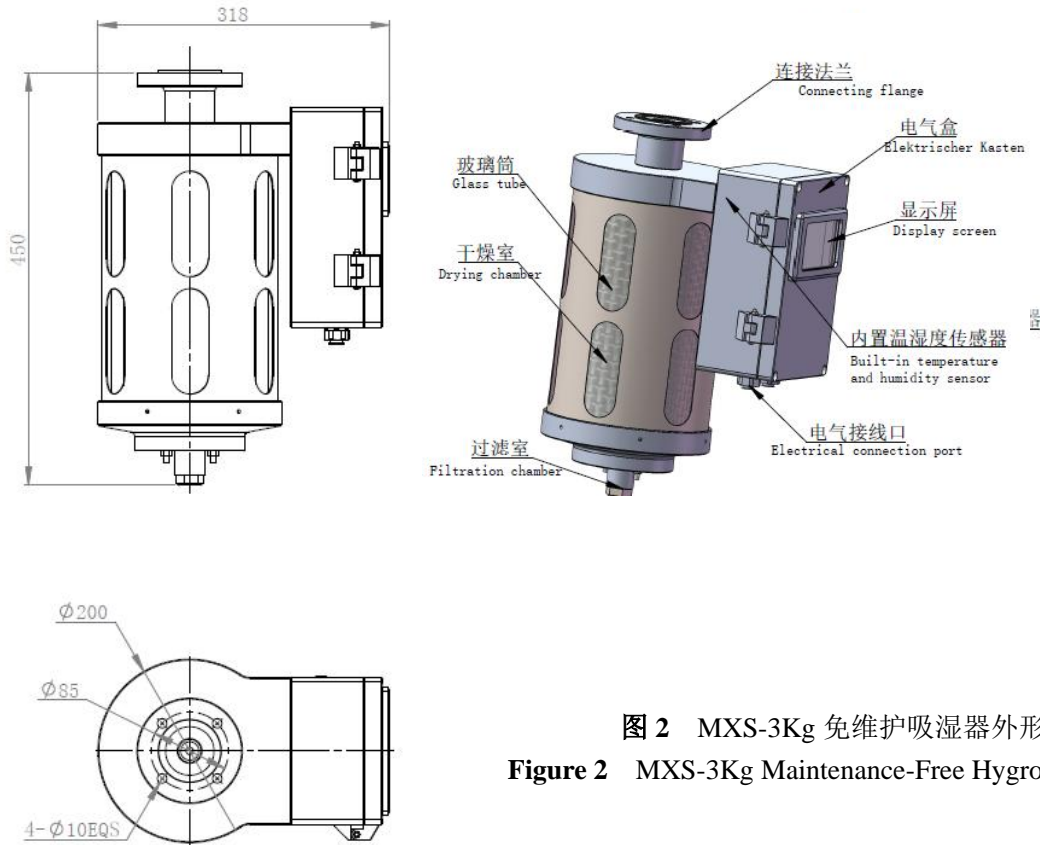


图 2 MXS-3Kg 免维护吸湿器外形图

Figure 2 MXS-3Kg Maintenance-Free Hygrostat Drawing

**2.4、电气接线原理图及功能详解(Electrical wiring schematic diagram and detailed function explanation)**

**接线说明 (板外)**

1. 简易说明, 本产品采用内外部接线方式, 内部为传感器接线, 外部为供电, 通讯以及报警输出; 所有端子均采用插拔式端子方便客户快速使用, 并且采用不同PIN数, 防止接错, 损坏设备。
2. 序号1-3说明: 1为零线输入, 2悬空, 3为火线输入。
3. 序号4-8说明: 4接地线, 建议接到大地; 5-8为两路485通讯线, 地址为01和02。
4. 序号9-17说明: 3组单刀双掷继电器, 9为常闭点, 10为公共端, 11为常开点, 剩下端子以此类推。第一组已设定好, 第二、三组可通过485进行设置或可定制功能。

N	L	EGND	A2	B2	A1	B1	NC1	COM1	ON1	NC2	COM2	ON2	NC3	COM3	ON3	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

**Wiring Instructions (External Board)**

1. Simple instructions: This product uses both internal and external wiring. The internal wiring is for the sensor, while the external wiring is for power supply, communication, and alarm output. All terminals use plug-in connectors for easy and quick use by customers, and different numbers of pins are employed to prevent incorrect connections and equipment damage.
2. Explanation for serial numbers 1-3: 1 is the neutral line input, 2 is floating, and 3 is the live line input.
3. Explanation of serial numbers 4-8: 4 is the grounding wire, recommended to be connected to the earth; 5-8 are two 485 communication lines, with addresses 01 and 02.
4. Explanation for serial numbers 9-17: There are 3 sets of single-pole double-throw relays. 9 is the normally closed contact, 10 is the common terminal, 11 is the normally open contact, and the remaining terminals follow in the same order. The first set is already configured, and the second and third sets can be configured via 485 or customized for specific functions.

N	L	EGND	A2	B2	A1	B1	NC1	COM1	ON1	NC2	COM2	ON2	NC3	COM3	ON3	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17