

## Environmental Declaration Type II

### GENERAL PRODUCT INFORMATION

<i>Name of product(s)</i>	<i>Packaging</i>
<b>RVAZ2 series of valve actuators</b>	Cardboard

### COMPANY INFORMATION

#### *Company, address and telephone*

AB REGIN  
Box 116  
SE-428 22 Källered  
Sweden  
Tel: +46 - (0)31 - 720 02 00  
E-mail: info@regin.se

#### *Company description*

Regin is the collected trademark for products and systems in building automation. The company's knowledge is based on many years of wide experience in control, automation and flow control. AB Regin has a certified quality assurance system according to ISO 9001.

#### *Ongoing environmental work*

Regin designs products on commission from clients as well as for resale. Regin can control environmental aspects related to product development and when choosing suppliers and components.

### PRODUCT INFORMATION

#### *General*

The recommended field of application is stated in the technical documentation.  
There is an unambiguous and lasting label (manufacturer, product name, serial number etc) on the product.  
The labelling is linked to the technical documentation which makes the product clearly identifiable.

#### *Product design*

The product consists of an assembled circuit board mounted in a plastic casing. There is a motor and gear box under the circuit board that drive a shaft in and out depending on control signal from other devices. This shaft then moves the valve stem up and down creating a flow control through the valve.

<i>Component modules</i>	Weight grams	Weight %
Enclosure	83	33
Motor	27	11
PCB	27	11
Wire	61	24
Gears	13	5
Drive shaft	2	<1
Screw nut and bolt M30 x 1,5 nut	5 2	2 <1
Connector	28	11
Accessories metal	2	<1
Accessories plastic	4	1,6

<b>PRODUCT INFORMATION, RESOURCES AND HAZARDOUS SUBSTANCES</b>		
<b>Component modules</b>	<b>Resources</b> (metals, organic, non-organic substances)	<b>Hazardous substances</b> (Kd, Hg, Pb, PCB, PVC, PBB, PBBE etc)
Enclosure	PA+ABS+GF	
Motor	Plastic, Cu, Fe	
PCB	Epoxy, Cu, Fe, Ag, Sn	
Wire	Cu, RoHS, halogen free	
Gears	POM	
Drive shaft	PPS	
Screw nut and bolt	Fe, Zn, SUS	
M30 x 1,5 nut	Brass	
Connector	PA+GF	
Accessories metal	Fe	
Accessories plastic	NBR, PA, PC, EPDM, ABS	

### **Notes, the product's content**

---

### **PRODUCTION**

The PCB components are mounted manually and automatically and are thereafter soldered together with classified soldering. The environmental consequences are negligible and consist solely of air outlet from soldering. The mechanical gear train, motor, drive shafts etc. are assembled manually. The operation does not require licencing

### **DISTRIBUTION**

**Production origin** Taoyuan, Taiwan  
**Mode of transportation** Boat, Lorry, train  
**Mode of distribution** The product is normally distributed via a warehouse/wholesaler  
**Wrapping Material** Wood, paper, plastic  
Packaging material can not be returned.  
AB Regin is connected to FTI.

### **BUILDING PHASE**

Documented instructions for mounting and commissioning are included with the product. The instructions contain recommendations concerning

- Safeguard measurement for handling procedures and mounting.
- Handling of the product at the workplace and during mounting.

## **USAGE PHASE**

### **Normal operation**

The product requires energy (electricity) during normal operation. Power consumption is <6VA. The product does not have any environmental impact on the surrounding environment during normal operation.

Normally, the product does not require any maintenance.

It is not possible to estimate the product's life span in advance other than in terms of complete running cycles.

There is no documentation concerning the expected life span when the product is under different conditions.

Documented instructions for appropriate operation and maintenance are supplied with the product.

### **Emergency**

In case of fire the plastic may emit gases harmful to human health. The amounts of these substances are small compared with the size of the product.

Circuit boards may emit toxic flue gases. The wire is halogen free.

## **DEMOLITION**

The product is prepared for environmental-friendly dismantling.

Dismantling of the product:

1. Open the product cover with a screwdriver (2 screws on the bottom).
2. Remove the base bracket, the one with the brass M30 x 1,5 ring.
3. Separate different components with their plastic clip fastening elements, including motor.
4. Separate the plastic and electronic parts and recycle at appropriate facility.

## **WASTE MANAGEMENT**

The long life span of the product means that the recycling situation may differ from today when the product is recycled.

The product is required, by law, to be handled according to standard waste management procedures. The materials can easily be separated to a high separation degree.

Plastic parts can, theoretically, be recycled. Recovering of energy through combustion is considered the best option in the present situation, since the plastic does not contain any substances dangerous to the environment.

Circuit boards with components are required by law to be dismantled and constituent components to be identified. Swedish companies in electronic recycling separate in three main fractions. Recycling of materials, recovering of energy and dangerous waste.

Identified metallic constituents are returned to metal recycling.

Combustible materials are returned for safe disposal in a licenced incinerator.

Dangerous waste is returned for destruction to a licenced entrepreneur.