

Environmental declaration Type II

GENERAL PRODUCT INFORMATION

Name of product series

RVAN-Range

Packaging

Cardboard

COMPANY INFORMATION

Company, address and telephone

AB REGIN

Box 116

SE-428 22 Kålleröd

Sweden

Tel: +46 – (0)31 – 720 02 00

Fax: +46 – (0)31 – 94 01 46

E-mail:

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 has no production of its own and has thereby no product related consequences for the environment. Regin can control environmental aspects related to product development and when choosing suppliers and components. AB Regin intend to begin working with environmental certification according to ISO 14 001.

AB Regin intends to gradually start developing MVD Type II (Regin's own environmental declaration) for our products.

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

RVAN-Range is a range of control valve actuators used to control the amount of fluid the valve lets through. They consist of five main parts. The bottom base connecting to the valve neck, the drive shaft connecting to the valve stem. Then a lower housing containing a gear box assembly and drive motor. On top of that there is a base plate and a plastic casing containing the PCB. The top cover contains a manual override button.

PRODUCT INFORMATION, RESOURCES AND HAZARDOUS SUBSTANCES

Information about product

Model		Designation	
RVAN5-24A		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
1529 g	Cardboard	172	1701 g

Composition of product and contents

Component	Weight(g)	Material
Housing	692	Zn,Fe,Al,Si,Cu,Mg
Cover	137	ABS,POM
Electrical motor	83	Plastic,Cu,Fe
Gear	98	POM,Glass,Cu,Zn
Drive shaft	81	SUS,Fe
Screw Nut and Bolt	92	Fe,Zn,SUS
Housing access. plastic	65	NBR,POM,Glass,Nylon66
Housing access. Metal	233	SUS,Fe,Cu,Zn,Al
PCB	48	Pb-Free

Information about product

Model		Designation	
RVAR5-24A		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
1667 g	Cardboard	145	1812 g

Composition of product and contents

Component	Weight(g)	Material
Housing	765	Zn,Fe,Al,Si,Cu,Mg
Cover	137	ABS,POM
Electrical motor	83	Plastic,Cu,Fe
Gear	98	POM,Glass,Cu,Zn
Drive shaft	129	SUS,Fe
Screw Nut and Bolt	92	Fe,Zn,SUS
Housing access. plastic	65	NBR,POM,Glass,Nylon66
Housing access. Metal	250	SUS,Fe,Cu,Zn,Al
PCB	48	Pb-Free

Information about product

Model		Designation	
RVAN10-24A		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2123 g	Cardboard	258	2381 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1110	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	105	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	81	SUS,Fe
Screw Nut and Bolt	98	Fe,Zn,SUS
Housing access. plastic	55	NBR,POM,Glass,Nylon66
Housing access. Metal	245	SUS,Fe,Cu,Zn
PCB	49	Pb-Free

Information about product

Model		Designation	
RVAN18-24A		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2371 g	Cardboard	258	2629 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1178	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	244	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	112	SUS,Fe
Screw Nut and Bolt	98	Fe,Zn,SUS
Housing access. plastic	55	NBR,POM,Glass,Nylon66
Housing access. Metal	255	SUS,Fe,Cu,Zn
PCB	49	Pb-Free

Information about product

Model		Designation	
RVAN25-24A		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2567 g	Cardboard	258	2825 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1270	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	244	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	112	SUS,Fe
Screw Nut and Bolt	108	Fe,Zn,SUS
Housing access. plastic	55	NBR,POM,Glass,Nylon66
Housing access. Metal	349	SUS,Fe,Cu,Zn,Al
PCB	49	Pb-Free

Information about product

Model		Designation	
RVAN5-24		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
1529 g	Cardboard	172	1701 g

Composition of product and contents

Component	Weight(g)	Material
Housing	692	Zn,Fe,Al,Si,Cu,Mg
Cover	137	ABS,POM
Electrical motor	90	Plastic,Cu,Fe
Gear	98	POM,Glass,Cu,Zn
Drive shaft	81	SUS,Fe
Screw Nut and Bolt	92	Fe,Zn,SUS
Housing access. plastic	56	NBR,POM,Glass,Nylon66
Housing access. Metal	233	SUS,Fe,Cu,Zn,Al
PCB	50	Pb-Free

Information about product

Model		Designation	
RVANI 0-24		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2132 g	Cardboard	258	2390 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1110	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	130	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	81	SUS,Fe
Screw Nut and Bolt	98	Fe,Zn,SUS
Housing access. plastic	55	NBR,POM,Nylon66
Housing access. Metal	236	SUS,Fe,Cu,Zn
PCB	42	Pb-Free

Information about product

Model		Designation	
RVANI 8-24		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2396 g	Cardboard	258	2654 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1178	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	273	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	112	SUS,Fe
Screw Nut and Bolt	98	Fe,Zn,SUS
Housing access. plastic	55	NBR,POM,Nylon66
Housing access. Metal	246	SUS,Fe,Cu,Zn
PCB	54	Pb-Free

Information about product

Model		Designation	
RVAN25-24		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2592 g	Cardboard	258	2850 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1270	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	273	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	112	SUS,Fe
Screw Nut and Bolt	108	Fe,Zn,SUS
Housing access. plastic	55	NBR,POM,Glass,Nylon66
Housing access. Metal	340	SUS,Fe,Cu,Zn,Al
PCB	54	Pb-Free

Information about product

Model		Designation	
RVAN5-230		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2238 g	Cardboard	258	2496 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1110	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	235	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	81	SUS,Fe
Screw Nut and Bolt	98	Fe,Zn,SUS
Housing access. plastic	64	NBR,POM,Nylon66
Housing access. Metal	236	SUS,Fe,Cu,Zn
PCB	34	Pb-Free

Information about product

Model		Designation	
RVANI0-230		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2238 g	Cardboard	258	2496 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1110	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	235	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	81	SUS,Fe
Screw Nut and Bolt	98	Fe,Zn,SUS
Housing access. plastic	64	NBR,POM,Nylon66
Housing access. Metal	236	SUS,Fe,Cu,Zn
PCB	34	Pb-Free

Information about product

Model		Designation	
RVANI8-230		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2347 g	Cardboard	258	2605 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1178	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	235	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	112	SUS,Fe
Screw Nut and Bolt	98	Fe,Zn,SUS
Housing access. plastic	64	NBR,POM,Nylon66
Housing access. Metal	246	SUS,Fe,Cu,Zn
PCB	34	Pb-Free

Information about product

Model		Designation	
RVAN25-230		Valve Actuator	
Weight	Packing	Weight of packaging	Total weight
2543 g	Cardboard	258	2801 g

Composition of product and contents

Component	Weight(g)	Material
Housing	1270	Zn,Fe,Al,Si,Cu,Mg
Cover	240	ABS,POM
Electrical motor	235	Plastic,Cu,Fe
Gear	140	POM,Glass,Cu,Zn
Drive shaft	112	SUS,Fe
Screw Nut and Bolt	108	Fe,Zn,SUS
Housing access. plastic	64	NBR,POM,Glass,Nylon66
Housing access. Metal	340	SUS,Fe,Cu,Zn,Al
PCB	34	Pb-Free

PRODUCTION

Regin has no production of its own and has therefore no product related environmental policy. The components are mounted manually and are thereafter soldered together with classified soldering. The environmental consequences are negligible, and consist solely of air outlet from soldering. The operation does not require licencing

DISTRIBUTION

Production origin Taiwan
Mode of transportation Lorry, train, ship
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 REPA.

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 Max 4,5W-12W depending on actuator force. 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 possible to estimate the product's life span in advance.

There is no documentation concerning the expected life span when the product is in operation 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.

DEMOLITION

The product is prepared for environmental-friendly dismantling.

Dismantling of the product:

1. Loosen screws to remove the top cover, dismantle the manual override button
2. Remove the black plastic housing from the base plate.
3. Remove PCB from black plastic casing.
4. Remove drive motor and gear assembly from bottom casing
5. Remove drive shaft and bottom actuator stand from upper housing

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.