


PRODUCT SPECIFICATION FOR

VA-7010 On-Off Actuators

06-88000-53

					
					TITLE: VA-7010, On-Off Actuator Product Specification
H	M08-147	SRO	03/05/08		
G	M06-278	HLT	08/08/06		
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					SHEET 1 OF 9

Revision History

Name	Date	Reason For Changes	Ver./Rev.
H. L. Torre	08/08/06	Artwork information was not present and needed to be controlled. It was added at end of Product Specification. Full life cycle rating was also added.	G
Sergio Rios	03/06/08	To Increase production capacity based upon 98%+yield through this testing process	H

Approvals

Role	Name	Signature	Date
Project Manager	James Whiteley		
Product/Program Manager	Robert Franecki		
Systems Engineer	Carlos Nunez		

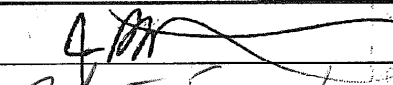


Hardcopy Approvals



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Project Manager	James Whiteley		3/11/08
Product/Program Manager	Robert Franecki		3/11/08
Systems Engineer	Carlos Nunez		3/11/08

Hardcopy Approvals

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1. Introduction

The actuator VA-7010 is a redesign of the old VA-7000 with the purpose of making it suitable to the new series of zone and radiator valves models VB-5X71/VG5000.

2. Performance

The actuator is operated by a synchronous motor with a reduction gear integrated.

A further reduction is obtained by a gear sector which meshes the pinion gear output of the reduction.

The same sector is used as lever to load and move downward the stem of the valve; upward movement is given by the internal valve spring.

The valve can manually operate by a lever which lock in position, the disconnection is automatic when giving supply voltage to the motor ("auto" working).

3. Technical Characteristics

Action: on-off type

Type of motor: synchronous stall

Power: VA-7010-8x01 supply voltage $24 \pm 10\%$ Vac 50-60 Hz

VA-7010-8x02 supply voltage $120 \pm 10\%$ Vac 50-60 Hz

VA-7010-8x03 supply voltage $230 \pm 10\%$ Vac 50-60 Hz

VA-7010-8x06 supply voltage $208 \pm 10\%$ Vac 50-60 Hz

VA-7010-8x07 supply voltage $277 \pm 10\%$ Vac 50-60 Hz

Power consumption: 7 VA

Nominal force: 105 N min. @ nominal power supply and amb. temp. (25°C)

90 N min. @ min. power supply (-10%) and max. temp. (50°C)

180 N max. @ max. power supply (+10%) and min. temp. (2°C)

Nominal stroke: 3 mm. (5 mm. max)

Nominal time stroke "ON": 10 sec.

Nominal time stroke "OFF": 5 sec.

Protection degree: IP 40 (IP 54 - future)

Electrical connection

Basic models:

VA-7010-8501 2x2.5 mm² terminal

VA-7010-8502 "

VA-7010-8503 "

Note: attachment #1 is a chart for typical actuator performance force versus power supply and temperature. The minimum force of 90 N allows the specified performance of close-off pressure and leakage rate on VG5000 valves series.

UL models (conduit fitting; length 0.5 m)

VA-7010-8001	2 wires: WHITE
VA-7010-8002	3 wires: BLACK + white + ground
VA-7010-8003	3 wires: YELLOW + white + ground
VA-7010-8006	3 wires: RED + white + ground
VA-7010-8007	3 wires: BLUE + white + ground

CE models

VA-7010-8101	cable, 2 wires, length 1.5m
VA-7010-8102/8103	cable, 3 wires, length 1.5m

Ground connection:	VA-7010-8001/8101/8501	not required
	VA-7010-8002/8003/8006/8007	green wire
	VA-7010-8102/8103	yellow/green wire
	VA-7010-8502/8503	screw and washer

Motor insulation voltage:	1700 V
Temperature limits:	2 to 50 °C performance -20 to 65 °C storage
Humidity:	noncondensing
Overall dimensions:	see picture 1
Manual Override:	Standard
Weight:	0.450 Kg
Material:	Cover: Self extinguishing V-O UL94 ABS+PC Support: Die Cast Aluminum Sector Gear: Sinterised Steel AISI 316L (X2CrNiMo 1712) Plate-Lever: Stainless Steel AISI 304 (X5CrNi 1810) Locknut-Bushing: Red Brass P-CuZn40Pb2 Conduit fitting: Die cast aluminum (UL models only)
Full Life Cycle Rating:	100,000 Cycles

4. Test

Test conditions:

- nominal power supply, 50 Hz
- ambient temperature (25 °C)

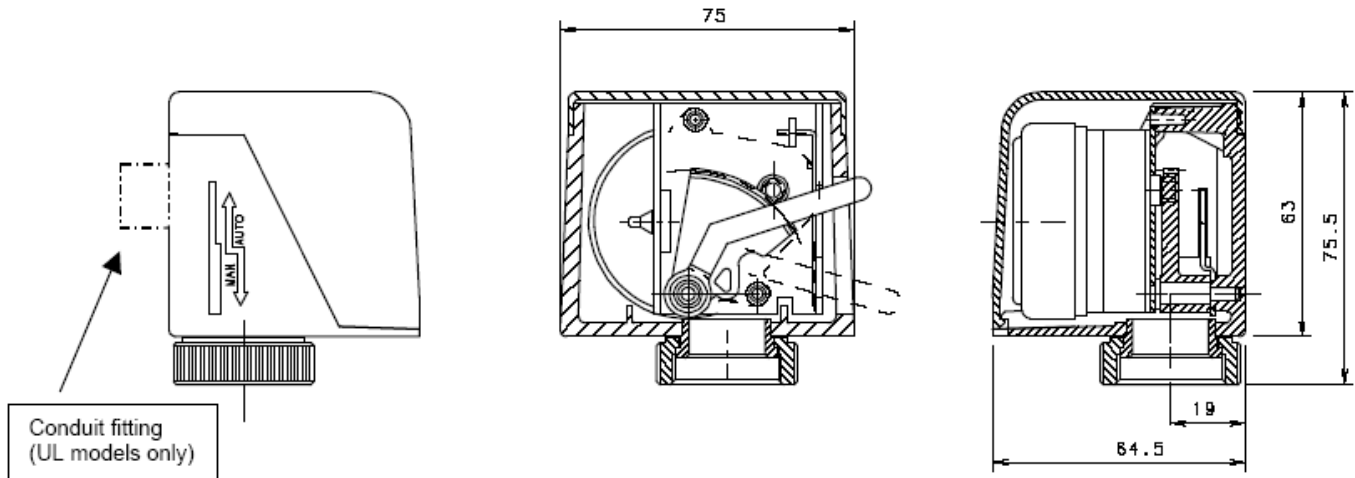
The actuator must work on/off against a load of 40 to 50 N for 3 mm stroke, for at least 10 cycles. Nominal force of 105 N min. has to be verified 100% of production.

5. Applicable Standards

The VA-7010 actuators series complies with EN-50081-1 and EN-50082-1 Directives. Only the VA-7010-810x cable electric connection actuators series complies with the EN 60335 Low Voltage European Directive and is 'CE' marked. The VA-7010-800x actuators series are "UL" approved and marked.

6. Packaging

Packaging should be as per Internal Procedure N° 319 and can be single or bulk. Print warning connection, voltage line, frequency, power consumption. The VA-7010-810x 1.5 m cable electric connection actuator series must be packaged with installation instruction multilingual sheet P/N. 14-88237-226, to comply with Low Voltage European Directive. The VA-7010-800x (UL approved) must be packaged with the installation instruction sheet P. No 34-636-763.



Picture 1

7. Artwork

VA-7010-8001

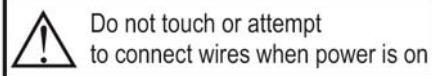
ELECTRIC VALVE ACTUATOR

24 V~, 50/60Hz, 7 VA, Class 2

Oper. Temp: 35°F to 122°F (2°C to 50°C)



Temp. Reg. Equip.



VA-7010-8002

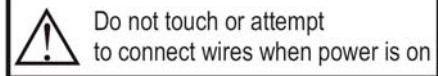
ELECTRIC VALVE ACTUATOR

120 V~, 50/60Hz, 7 VA

Oper. Temp: 35°F to 122°F (2°C to 50°C)



Temp. Reg. Equip.



VA-7010-8003

ELECTRIC VALVE ACTUATOR

230 V~, 50/60Hz, 7 VA

Oper. Temp: 35°F to 122°F (2°C to 50°C)



Temp. Reg. Equip.



LR85083



Do not touch or attempt to connect wires when power is on

VA-7010-8091

ELECTRIC VALVE ACTUATOR

24 V~, 50/60Hz, 7 VA, Class 2

Oper. Temp: 35°F to 122°F (2°C to 50°C)



Do not touch or attempt to connect wires when power is on

VA-7010-8101

24 V~, 50/60Hz, 6.5 W

PROTECTION IP 40



Do not touch or attempt to connect wires when power is on

VA-7010-8103

230 V~, 50/60Hz, 6.5 W

PROTECTION IP 40



Do not touch or attempt to connect wires when power is on

VA-7010-8105

100 V~, 50/60Hz, 6.5 W

PROTECTION IP 40



Do not touch or attempt to connect wires when power is on

DO NOT TOUCH OR ATTEMPT TO CONNECT WIRES WHEN POWER IS ON

ACHTUNG: VOR O'FFNEN STROM ABSCHALTEN

NE PAS TOUCHER OU RACCORDER SOUS TENSION – COUPER D'ABORD –

NON ESEGUIRE O TOCCARE COLLEGAMENTI ELETTRICI SOTTO TENSIONE

VA – 7010 – 8503
230 V ~ 50 / 60 Hz

