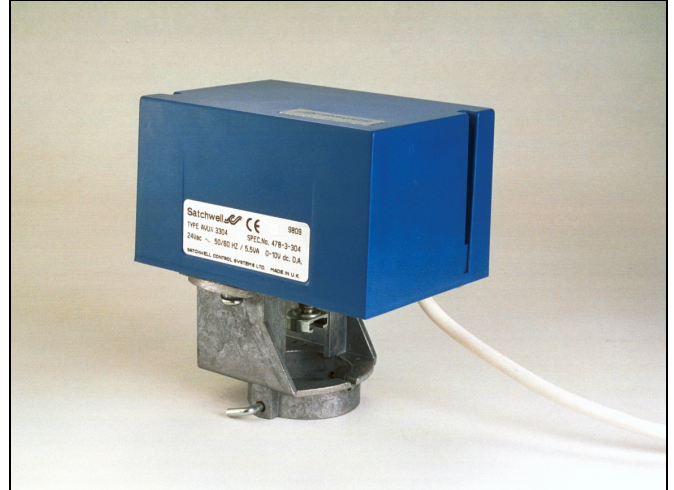


VALVE ACTUATORS

The AVUX and AVUM valve actuators are designed for use on the VZX two port valve and the MZX three port valve. The AVUX is a 24 Volt ac reversing actuator suitable for modulating the VZX and MZX valves from any 24 Volt ac controller or device. The AVUM is a mains Voltage reversing actuator and can be controlled from any controller or device having a mains switched output.



FEATURES

- Simple to install. Direct coupling to valve without use of tools.
- Fly lead to ease site wiring.
- EMC approved product.
- Minimal commissioning. No site adjustments required (self stroking).
- Compact size.
- Universal for use with Satchwell VZX and MZX valves from ½" to 2" and Satchwell unit valves (½" and ¾").
- Built in manual operator.



ACCESSORIES
 DS 5.200 - Rain Protection Cover
 VALVES
 DS 4.101 - VEU, MEU, FEU
 DS 4.18/4.401 - VZX
 DS 4.38/4.601 - MZX

SPECIFICATION

Type:	AVUX 3202 - 24Vac reversing actuator - Specification No. 478-3-202 AVUM 3601 - 220 to 240Vac reversing actuator - Specification No. 478-3-601
Power Supply:	AVUX: 24V ac ($\pm 10\%$), 50/60Hz AVUM: 230Vac ($\pm 10\%$), 50/60Hz
Power Consumption:	AVUX: 2VA AVUM: 2.5VA
Action:	Reversing, modulating
Stroke:	12.7mm
Stroke Time:	100 seconds
Thrust:	220N
Electrical Connection:	Colour coded fly lead 3 core (AVUX) and 4 core (AVUM), 1.5m long
Ambient Temperature Limits:	Operating: -20 to 50°C Storage/Transit: -40 to 70°C
Maximum Ambient Humidity:	Operation and storage: 95% non condensing
Associated Valves:	See table.
Associated Controllers:	AVUX: CSC - DS 2.021 CSMC - DS 2.47/2.541 MMC - DS 2.701 CXT - DS 2.22/2.101 CXR - DS 2.24/2.110 IAC - DS 2.801 and 2.951 BAS - DS 13.34/13.310 and 13.41/13.341, 13.55/13.355 URC - DS 13.301 AVUM: CSC - DS 2.021 CSMC - DS 2.47/2.541 BAS - DS 13.34/13.310, 13.41/13.341, 13.55/13.355

CONSTRUCTION

Case:	Mild steel baseplate with moulded plastic cover. Fire resistant to UL94V-0.
Mounting Bracket:	Die cast aluminium with angled fixing screws.
Motor:	Reversible capacitor phased synchronous motor fitted with magnetic clutch. Continuously rated. Actuator travel limited by magnetic clutch slipping at either end of the stroke.
Spindle Coupling:	Simple claw type engagement for quick assembly.
Manual Operator:	By thumb rotation of the partially exposed gear wheel.
Accessories:	Rain Protection Cover - DS 5.200

VALVE/ACTUATOR COMPATIBILITY

ACTUATOR	VALVE								
	VEU Mk2 (2 Port) 623-2	MEU Mk2 (3 Port) 627-2	FEU Mk2 (4 Port) 628-2	VEU Mk4/5 (2 Port) 623-4/5	MEU Mk4/5 (3 Port) 627-4/5	FEU Mk4 (4 Port) 628-4	FEU Mk4/5 (4 Port) 628-5/6	VZX (2 Port) 624-4	MZX (3 Port) 626-4
AVUX Mk3, AVUM Mk3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

INSTALLATION

Observe the following important installation points:

LOCATION

Select a location that is reasonably clean and free from damp and condensation. Ambient temperatures must be within the limits shown under specification.

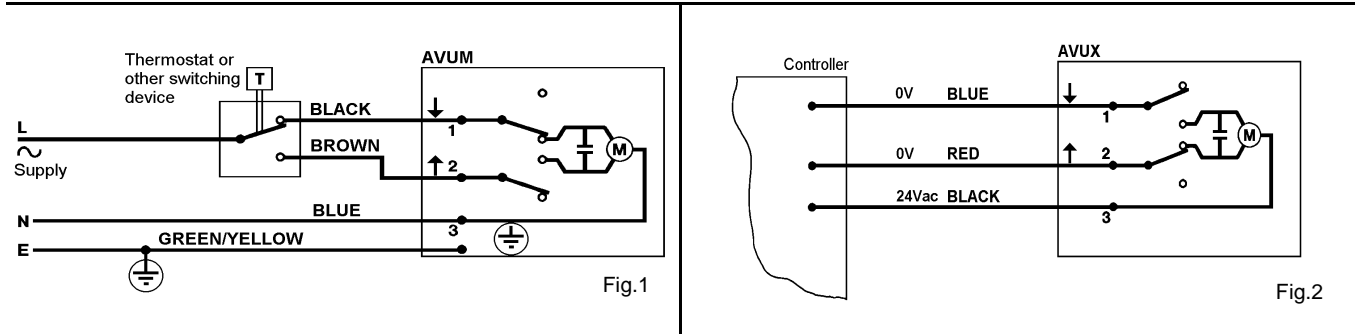
**NOTES: DO NOT REMOVE THE ACTUATOR COVER AS LIVE PARTS ARE EXPOSED.
DO NOT SWITCH ON THE POWER SUPPLY UNTIL COMMISSIONING HAS BEEN CARRIED OUT.**

1. Check that the actuator is the correct Voltage for the controller or device being used.
2. Unscrew the two captive angled fixing screws in the mounting frame and with the valve spindle fully withdrawn, tilt the actuator and lower it over the valve so that the claw coupling on the actuator spindle engages with the grooved bush on the top of the valve spindle.
3. Now lower the actuator frame onto the valve clamping face and finger tighten the two angled screws. Tools are not required.
4. Connect the colour coded fly lead to the controller observing the appropriate wiring precautions and wiring diagrams below.

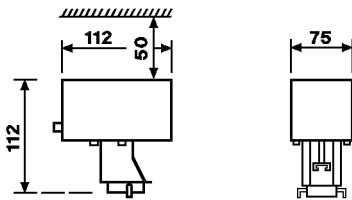
COMMISSIONING

1. Check that the actuator is the correct Voltage for the controller or device being used.
2. Check that the actuator is wired in accordance with the wiring precautions and diagrams.
3. Check that the actuator is correctly fitted to the valve and that the fly lead is routed clear of the valve body and pipework.
4. Check for correct operation of the valve when power is applied from the controller or device and that the actuator operates in both directions.

CONNECTION DIAGRAMS



DIMENSION DRAWING



Dimensions in mm
Weight: 0.62 Kg

WIRING PRECAUTIONS

Wiring from actuator to controller*:	Max. length of 1.5mm ² cable unscreened	Max. resistance per conductor
AVUX - 24Vac	100m	5 Ohms
AVUM - 230Vac	100m	10 Ohms

*When wiring to a BAS outstation refer to the appropriate outstation data sheet for the wiring precautions.

For longer lengths, increase cable size and observe the maximum resistance shown in the table. Screen the wiring, earthing the screen at the controller end only.

AVUM actuators are at mains potential observe local wiring regulations and usual safety precautions.

Satchwell

Satchwell Control Systems Limited
Farnham Road
Slough
Berkshire SL1 4UH
United Kingdom

Telephone +44 (0)1753 550550
Facsimile +44 (0)1753 824078
www.satchwell.co.uk

An Invensys company

CAUTION

- The AVUM is at mains potential. Local wiring precautions and usual safety precautions must be observed.
- Do not remove the cover as mains potential will be exposed.
- The AVUX is a low Voltage (24Vac) device. Local wiring regulations and usual safety precautions must be observed.
- Observe wiring precautions.
- Observe installation instructions.
- Do not switch on power supply until commissioning checks have been carried out.
- Observe maximum and minimum ambient temperatures.
- Check maximum differential pressure of valve to be driven. Do not exceed maximum differential pressure.
- Interference with parts under sealed covers invalidates the guarantee.
- Design and performance of Satchwell equipment is subject to continual improvement and therefore liable to alteration without notice.
- Information is given for guidance only and Satchwell do not accept responsibility for the selection and installation of its products unless information has been given by the company in writing relating to a specific application.
- A periodic system and tuning check of the control system is recommended.
- Please contact your local Satchwell Service office for details.