

VMS-30 FAST DAMPER ACTUATOR

- Heavy duty electric actuator
- 24VAC synchronous motor
- Modulating control Tri-State cw/off/ccw
- Position signal feed back 0..5 k Ω
- Protection class IP54
- Fitted with connection cables
- Rotation adjustable from 0..90°
- Factory set to 0..90° rotation
- Aux end switches set at 5° and 85° rotation
- Rotation speed 30s for 0..90° at 50Hz
- Torque 4 Nm continuously rotating
- CMR standard 24 month warranty
- 15 Years field application experience

The VMS-30 damper actuator has been designed for commercial and industrial ventilation applications. The protection class is IP54 and it can be installed in any in-door normal environment. It is being used in high rise office blocks for the ventilation control or in many clean room pressure or constant air volume applications where a fast and reliable air volume control must be achieved. It is also used in fume cupboard extract and make up air laboratory control where long term reliability is required.

It has a rotating clamp which can grip 8..12mm square damper shafts or 8..16mm round damper shafts. It will fit perfectly onto the CMR fume cupboard control valves. It will also fit directly onto the CMR square or rectangular dampers with gear drive or the round PPs chemical resistant valves and the galvanised or stainless steel valves. CMR manufactures all the associated mounting brackets also to suit specific custom applications. The motors are best used with the CMR dampers as the rotating shaft and gear mechanism on the damper must be able to withstand very fast small open and closed commands under automatic control.

The actuator has a synchronous 24VAC motor which has the advantage that it cannot be overloaded. Two adjustable end switches are fitted to stop the motor on closed and on open positions. Two additional adjustable end switches with volt free contacts are available for indication on closed and open position for other control systems.

There is a rotating position indicator which is part of the clamp and a red arrow can be adjusted to show the actual position. It is highly visible at a distance. A feed back is standard which is a potentiometer having a variable resistance of 0..5k Ω . The potentiometer can be replaced easily by a spring clip.

A manual push button clutch mechanism can be operated by hand. When pushing the manual button, it disengages the gear drive to the application. The clamp can then be rotated manually to any position. The power should be isolated before using the manual push button as otherwise the motor drives back to the control position when the button is released. This function should only be used in a controlled maintenance condition.

When there is a power failure, the motor shall remain in its last position. It has no fail safe spring return action. There is no electronic built into the actuator and there are no further adjustments to be made. Once the motor has been commissioned it will be set for life and is maintenance free.

A cable is factory fitted and can be terminated according to a wiring diagram which is on a label fixed to the actuator. The damper motor is factory tested.



VMS-30 Actuator



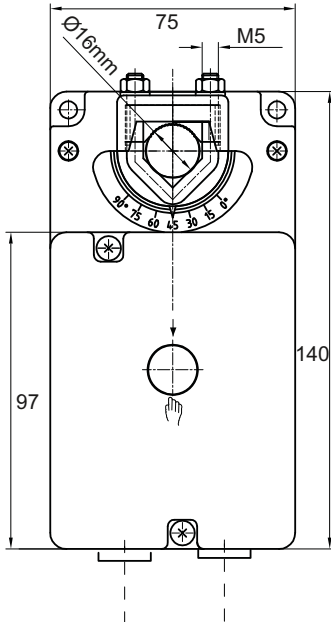
PPs modulating venturi valve with VMS-30



Galvanised modulating Valve with VMS-30

VMS-30 TECHNICAL SPECIFICATION

VMS-30 Part No. 204-036



TEST PROCEEDURE

0°
45° = CW rotation
90° = CW rotation

90°
45° = CCW rotation
0° = CCW rotation

Check Potentiometer must be 5 kΩ

CMR Technical Data Electric Actuator Type VMS-30 Part No. 204-036	
Characteristic	Specifactions
Motor and Nominal voltage	Synchronous reversible 24 VAC 50/60 Hz +/- 10%,
Protection class	IP54 (cable fitted downwards)
Power Consumption	1.3 W
Transformer sizing	2 VA
Max output torque	4 Nm
Rotation direction	Selectable by changing over wires on terminals
Angle of rotation	Max. 0..95° adjustable via end switches
Manual adjustment	With Hand push button disengaging of gears
Drive shaft Clamp	◇ 8..12mm square or ○ 8..16mm round damper shaft
Running time	30 seconds for 90° during normal operation
Feedback	0..5kΩ
Control signal	Tri-State 24VAC
Motor endswitches	2 x SPDT 250 V 2.5 (5) A ES1 = 0° ES2 = 90°
Aux. endswitches	2 x SPDT 250 V 2.5 (5) A ZS1 = 5° ZS2 = 85°
Humidity	5...95% RH non condensing
Operating/Storage temp.	-20 to +50°C / -40 to +85°C
Duty cycle	Continuous
CE	73/23/EWG,89/336/EWG
Connection Cable	Poti 3 x 0,75 mm², motor +ZS 7 x 0.75 mm² x 900mm L
Weight	approx. 0.5 kg
Maintenance	Maintenance free
Wiring schematics VMS-30 Actuator Part No: 204-036 Speed 30s at 4Nm	<p>Motor is factory set to 0° (ccw)</p>
Tri-State Modulating	
0° = CCW rotation 90° = CW rotation	

