



Industrial Damper Actuator IP66 On/Off and Raise/Lower

ORL

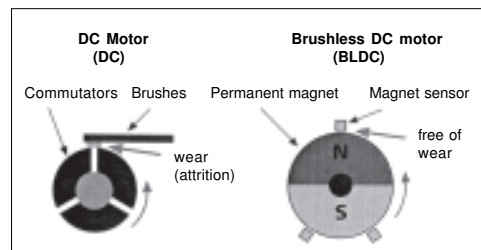
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...for those who like to know more!

Brush less DC-Motor (BLDC)

Brushless – all the way...

AP applies exclusively brushless DC-Motor .



Features and Benefits of BLDC:

No brushes or commutators to wear out

- Long life, thanks to touchless controlling
- Low noise, no sliding parts

Electronic motor management

- Exact control of speed and torque
- Wide area of running time and voltage

Result:
Long and reliable life of AP actuators.

Self - Centering Adapter

Our Self Centering, Snap-In Universal Mounting Clamp is as easy as 1, 2, 3...

- The clamp snaps in quickly and easily without any clips or tools
- Only one nut to adjust to center on different control shaft diameters
 - Small housing from Ø 8...20 mm shaft diameter
 - Medium housing from Ø 10...26 mm shaft diameter
- The clamp teeth bite and hold the shaft to eliminate slippage or lateral movement

Result:
This is the easiest, quickest and surest way to direct couple an actuator to a damper or valve control shaft!

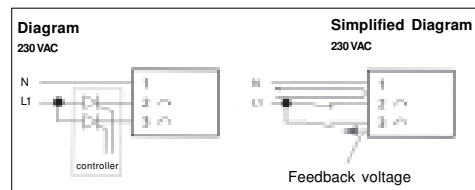
We reserve the right to make changes and improvements in our products which may effect the accuracy of the information contained in this leaflet.

Leakage Voltage by 230 V 3 point operations

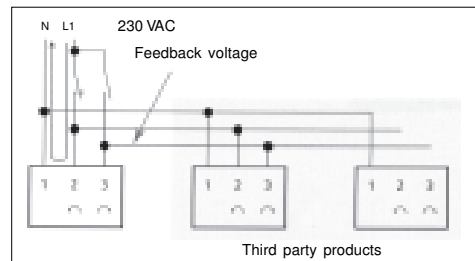
Leakage voltage is disagreeable; it may ruin the output (Thyristors, triacs) of inexpensive controller .

Moreover leakage voltage can obstruct the functioning of parallel installed third parties or even paralyse completely .

All AP products avoid leakage voltage at the inputs which are not controlled.



Equivalent business: Leakage voltage can disturb the functioning of third party products by paralleling.



Result: 3-point-actuators have to be free from feedback voltage!



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Features

- On/off and Floating combined in one actuator
- Wide supply voltage range
- Automatic shutoff either when reaching program med hard-stop or when reaching mechanical end-stop
- No return voltage
- Innovative solution for 100% self-locking
- Identical accessories for all models
- Identical control functionality for all models
- Homogeneous control and voltage variants for all models
- Universal wiring schematics
- Simple one-handed manual positioning
- No disengaging of gears required
- Manual positioning crank tool included as standard
- Direction of rotation (CW or CCW) selectable via switch
- Centric clamping adapter as a standard feature
- Form fit adapter available in different sizes
- Special solutions for aggressive environments available upon request
- Very quiet operation
- Constant running time, independent of load
- Constant torque throughout the entire operating range

Usage

Intended to be used for the operation of dampers, valves and other process control systems.

The ORL-series of actuators remain in position in case of a power supply interruption.

Direct mounting of the actuators onto the damper shafts is achieved via the centric clamping adapter.

An enclosed anti-rotation strap ensures that the actuator remains in a defined position.

Ordering

ORL 54P Damper Actuator 5Nm 24Vac/dc
ORL 53P Damper Actuator 5Nm 230Vac

ORL 104P Damper Actuator 10Nm 24Vac/dc
ORL 103P Damper Actuator 10Nm 230Vac

ORL 154P Damper Actuator 15Nm 24Vac/dc
ORL 153P Damper Actuator 15Nm 230Vac

ORL 204P Damper Actuator 20Nm 24Vac/dc
ORL 203P Damper Actuator 20Nm 230Vac

Accessories

AUX 1SW Auxiliary switches 1 x SPDT
AUX 2SW Auxiliary switches 2 x SPDT
POT 1K Feedback potentiometer 1000 ohm



Technical Data

Power supply	24Vac +/-20% 50/60Hz 24Vdc +/-10% 230Vac 50/60Hz (90 to 264V)
Starting Current	max. 3A at impuls 5ms, 5/10/15Nm max 6A 20Nm
Protection class	24V III safety extra low voltage 230V II protective insulation
Electrical connection	Cable 0,9m, 3 x 0,75mm ²
Direction of rotation	Selected by Switch L / R (ccw/cw) or by mounting L / R (ccw/cw)
Manual override	One-handed positioning Without disengaging of gears
Angle of rotation	Maximum 95°
Adapter for axis	Self centering, Ø 8-20 mm
Running time	90 s (± 5%), independent of load
Noise level	< 35 dB (A)
Position indication	Mechanical
Ambient temperature	-30...+ 50°C
Storage temperature	-40...+ 80°C
Ambient humidity	5...95% rH
EMC	EN60730-1, EN60730-2, EN55022 ClassB, EN55014, EN61000
Weight	850g - 1200g (depends on version)
Maintenance	Maintenance free
Standards	The actuators meet CE requirements (EN 60730-1)



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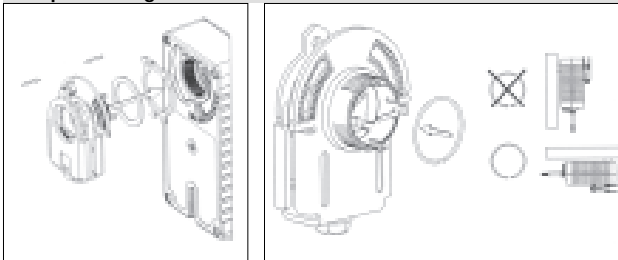
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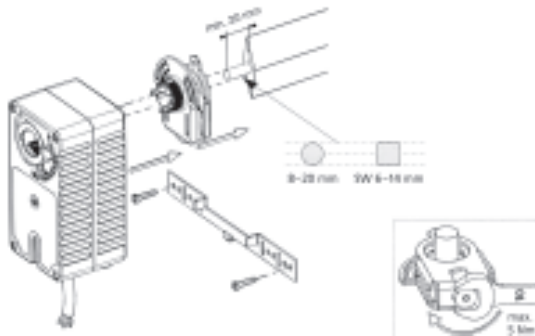
Mounting

- Direct coupled to shaft
- Fast and easy installation
- Snap in, self centering single nut universal mounting clamp
- Fast, flexible and easy installation. Even short shaft mounting!

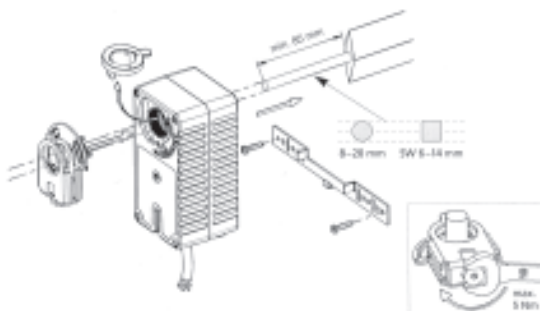
Adapter montage



Short shaft Mounting (min 20mm)



Standard Mounting (min 85mm)



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Operating Control

Pictures

Manual override (crank)



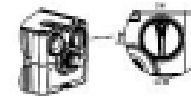
Function

For manual adjustment

1. Press the red button, when the actuator is connected to the power supply
2. Slowly turn the actuator to the desired position
3. Wait until the actuator has stopped prior to changing direction
4. Slowly move against the limit stops

Direction of rotation

Adapt direction of rotation of the damper by using the switch of the actuator.



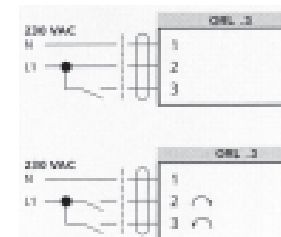
Standard operating

Control is achieved via the transmission line 2 and 3 either with the functions On/Off or with the functions On/Off and stop(floating).

The actuator is overload protected, does not require any limit switches and automatically stops at the mechanical end stop.

Manual positioning is achieved with the enclosed positioning key which turns the actuator into desired position.

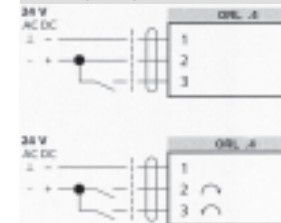
Wiring Diagram 230V



ON/OFF

Floating

Wiring Diagram 24V



ON/OFF

Floating

Parallel connecting possible - Attention to power consumption

Product	Power Consumption		
	Operating	Stop	Transformer sizing
ORL 54P	3VA/1,5W	1W	4VA
ORL 53P	5VA	2VA	5,5VA
ORL 104P	4VA/2W	1W	5,5VA
ORL 103P	7VA	2VA	7VA
ORL 154P	5,5VA/3W	1W	7VA
ORL 153P	9VA	2VA	8,5VA
ORL 204P	7VA/4W	1W	7VA
ORL 203P	11VA	2VA	8,5VA

All Dimension in mm

