

Work with

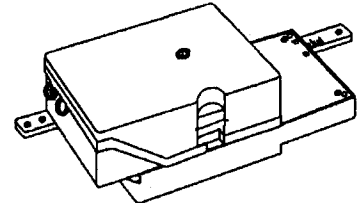
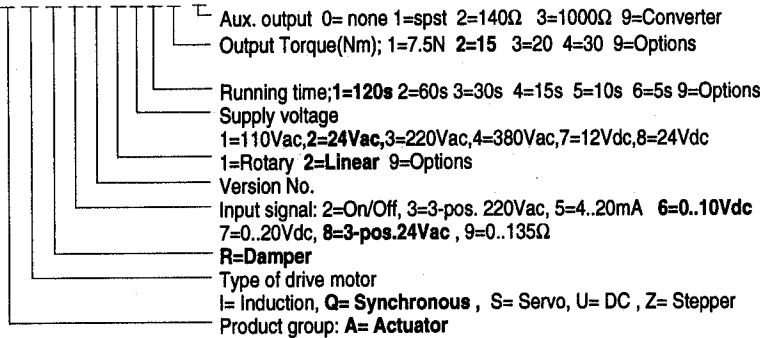
- * ATI
- * Barber coleman
- * Honeywell
- * Johnson
- * Landis & Gyr
- * Satchwell
- * Sauter
- * Staefa
- * T/A
- * TEG
- * Others

Electric Linear Actuators

Synchronous motor drives, 3-Position, 24Vac
with Magnetic coupling safety system

AQR85.2.

AQR85.2212 0



Description

Electrical actuator, 3-position, stretch-stop-retract control, travelling distance is 62mm, magnetic coupling with mechanical limitation system without spring return.

Application

In heating, ventilating, air conditioning and other industrial installations for control of air dampers, VAV terminals and other ventilating openings having up to 5m² to be controlled by electrical remote control. Relay signals are also acceptable.

Ordering Specification

When ordering, please give full designation and type reference of unit;

Ex: AQR85.2212.0 Electrical Damper Actuator
3-position control
Linear type, 24Vac, 120s, 400N
for aux unit

Technical Data

Supply voltage	24V ac ± 20%
Frequency	50Hz, 60Hz
Power source	Synchronous motor
Power consumption	3VA...
Running time	125s at 60Hz. 150s at 50Hz
Model of control	3-Position
Travel / linear	62mm
Noise level	>35[dB] max.
Nominal Torque	400N.constant
Torque limiter	Magnetic coupling
Control signal	
Neutral (G0)	N (C)
Control signal(Y1)	P1(A)
Control signal(Y2)	P2(B)
Aux.output	
Resistance	0...1000 (0...100%)
Switching	10(3)24...250Vac
Weight	1.Kg
Permissible amb.temp.	
Operation	-15...+50°C
Transport & storage	-30...+65°C
Permissible amb.humid.	class D to DIN 40040
Protection standard of housing	IP54 to DIN 40050
Max. medium temp.	+150 °C
Cable entry glands	PG11

Accessories;

position indication unit	
-potentiometer	-0...140Ω
-potentiometer	-0...1000Ω
position alarm switch	
-snap action switch	10(3)A 24...250Vac

Estimated life time

-Drive motor	40,000,000 cycles
-Gear train	80,000,000 cycles

Summary of types

Type Nr.	Output Torque	Running time		Space for Aux.units		
		50Hz	60Hz	0	1	2 3
AQR85.22110	7.5Nm	150s	125s	0	SW	140Ω 1000Ω
AQR85.22120	15.0Nm	150s	125s	0	SW	140Ω 1000Ω
AQR85.22130	20.0Nm	150s	125s	0	SW	140Ω 1000Ω
AQR85.22140	30.0Nm	150s	125s	0	SW	140Ω 1000Ω
AQR85.22210	7.5Nm	72s	60s	0	SW	140Ω 1000Ω
AQR85.22220	15.0Nm	72s	60s	0	SW	140Ω 1000Ω
AQR85.22230	20.0Nm	72s	60s	0	SW	140Ω 1000Ω
AQR85.22240	30.0Nm	72s	60s	0	SW	140Ω 1000Ω

Function

The actuator is controlled by a standard signal of 3-position On/Off relay received from conventional electro-mechanical switch of temperature, pressure, level, etc., or from conventional electronic switching controller or DDC unit. It provides electronic position control which, in conjunction with ATI or any compatible paddle type air dampers or air valves.

Power supply to Y1	: Stretch forward
supply to Y2	: retract reverse way
disconnect power	: remain still at the position

**This type of actuators can be used for time based pulse output signal for P, PI, PID controls such as DDC or PLC supervisory system.

For slave control of series connection of many units you must use potentiometer.

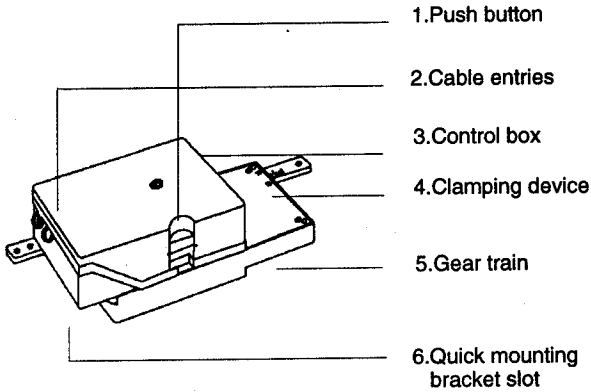
Auxiliary units

Reference output any combination of following.
- 0...1000Ω resistance signal allows indication of position.
- On / Off switching units

Design Features

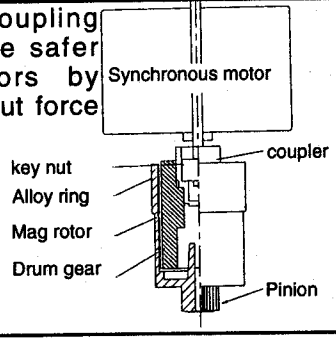
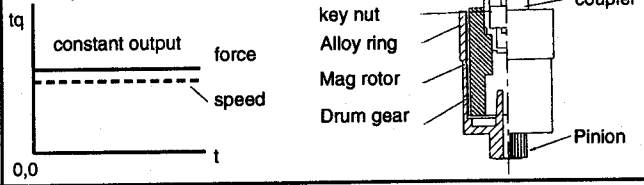
Actuator are supplied as separate units. Assembling them requires neither special tools nor adjustments.

- Maintenance free electrical actuator with reversible synchronous motor
- A switch on PCB can reverse the rotation of the actuator.
- Blocking proof gear train with self-lubrication sintered bearings
- Quick mounting bracket make easy installation.
- Constant speed and constant power-torque-
- Contactless coupling insures long life and quite operation.
- Gear train is made of aluminum die-cast and specially coated for corrosion proof.
- Important gears are made of sintered metal or special tool steel and heat treatment.



Special features

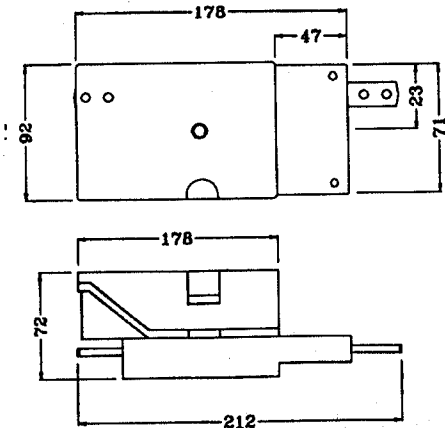
Utilizing hysteresis coupling technology gives more safer operation of actuators by providing constant output force and speed.



Application Advice

For further information on the complete regulating unit consist of actuator and valve also refer to the Data Sheet of the various type of valves, 43000... 44999. Observe the permissible temperatures. For details refer to <Application> and <Technical Data>

Dimensions



Dimensions in mm

Data Sheet 34001 contains basic system data on POLYTEK. All hints and explanations given in this sheet must be observed.

All units connected to terminals Y and U, together with the AQR..., must be connected to the same G0. The factory fitted link across terminals R and M may be removed only if a unit is connected between these terminals.

Mounting and Installation Advice

Mounting positions:

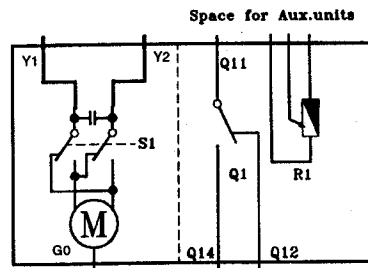
The actuator's mounting instructions are supplied in the box of the unit.

Commissioning Advice

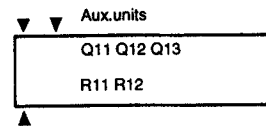
When commissioning the installation, check the wiring and make a functional test.

Wiring Diagram

Internal Diagram



Connecting terminals



- Y1 = Operating voltage P1
- Y2 = Operating voltage P2
- G0 = system neutral (SN)
- Q11 = Switch common
- Q12 = Normal close
- Q13 = Normal open
- R11 = Measuring neutral
- R12 = 0...1000

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