

AR30 W21...23: Motorised actuator

How energy efficiency is improved

Electric cut-off in end position to save energy

Features

- Actuation of control units such as control dampers, control valves and butterfly valves for controllers with a switching output (3-point)
- Synchronous motor with limit switch
- Maintenance-free gear unit
- Moves the control unit to any intermediate position
- Cable gland M20 × 1.5



AR30W23SF020



Technical data

Power supply		
	Power supply 230 V~	±15%, 50...60 Hz
	Power supply 24 V~	±20%, 50...60 Hz
	Power consumption 230 V~	3.7 VA
	Power consumption 24 V~	4.8 VA
	Operating time	100%
Power consumption with 60Hz	230 V~	4.2 VA
	24 V~	5.4 VA
Parameters		
	Angle of rotation ¹⁾	90°
	Torque and holding torque	15 Nm
	Admissible damper surface area ²⁾	5 m ²
Ambient conditions		
	Storage and transport temperature	−30...70 °C
	Admissible ambient temperature	−20...60 °C
	Admissible ambient humidity	5...95% rh
Construction		
	Weight	1.1 kg
	Housing material	Cast light alloy; cover made of transparent, flame-retardant plastic
Standards and directives		
	Type of protection ³⁾	IP 55 (EN 60529), in hanging position IP 54
Type AR30W21F001 CE conformity as per	Directive 2006/95/EC	EN 60730-1/ EN 60730-2-14
Type AR30W21F001 and AR30W21F020 CE conformity as per	EMC directive 2004/108/EC	EN 61000-6-1/EN 60730-2-14 EN 61000-6-3/EN 61000-6-4
Overview of types		
Type	Running time for 90°	Voltage
AR30W21F001	30 s	230 V~
AR30W21F020	30 s	24 V~
AR30W22F001	60 s	230 V~
AR30W22F020	60 s	24 V~
AR30W23F001	120 s	230 V~
AR30W23F020	120 s	24 V~

¹⁾ Angle of rotation of end shaft is adjustable from min. 30° to max. 320° by means of a switching cam (starting point is freely selectable). If a potentiometer is fitted: Observe angle of rotation of potentiometer

²⁾ Recommended value for equal-sided, smooth-running air dampers, for AR30W21 damper area = 4 m²

³⁾ Degree of protection IP 55 with cable gland M20 × 1.5



Accessories

Type	Description
0188813000	Ball joint for clamping lever
0294148000	Fixing bracket for wall mounting
0294967000	Pivot pin for clamping lever
0370059000	Clamping lever for shaft, Ø 8...18 mm
0370772001	Two sets of auxiliary contacts, permissible load 10 (2) A, 250 V~
0370774001	Crank handle for manual adjustment
0370785001	Position indicator
0370819000	Flat-sided hub
0372460001	Cable screw fitting (plastic M20 × 1,5) incl. locking nut and seal
0370780001	Potentiometer, 2000 Ω, 1 W
0370781001	Dual-operation potentiometer 130/2000 Ω, 1 W
0370644001	Rotation-angle cog set 90° or 180°, with coupling
0370644002	Rotation-angle cog set 120° or 150°, with coupling

⚙️ *Auxiliary change-over contacts: Switching cam 180° ON or 180° OFF can be positioned at any point over the entire angle of rotation (360°)*

Description of operation

The control unit to be activated can be moved to any chosen intermediate position by closing the electrical circuit using terminals 1-2 or 1-3. The end shaft rotates in the anti-clockwise direction (viewing the end shaft from the actuator) when the power is applied to terminal 2. The reversible synchronous motor is switched off in the end positions by the limit switches.

Intended use

This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.

All related product documents must also be adhered to. Changing or converting the product is not admissible.

Engineering and fitting notes

The max. internal equipment for the actuator is: 2 change-over limit switches (standard), 2 auxiliary change-over contacts and 1 dual-operation potentiometer.

The angle of rotation of the end shaft is continuously adjustable between min. 30° and max. 320° by means of a switching cam. When a potentiometer is installed, the related angle of rotation of the end shaft depends on the selected rotation-angle cog set and must be considered when adjusting the limit switch. The end contacts and auxiliary change-over contacts are adjusted centrally on the switch tower, which has a direct mechanical connection to the end shaft.

The connections for the auxiliary functions are located on the front of the printed circuit board, with screw terminals (max. 1.5 mm²), and the earthing terminal is on the light-alloy housing. The actuator is fastened by means of threaded holes on the end shaft side (4 M5 holes as in AR30 W1, or 3 M6 holes as in A44 W). The motorised actuator can be fitted in any position.

Additional version information

Due to the permanent lubrication of the motor and the gear unit, no maintenance is required for the actuator. Manual adjuster using accessory crank, for 90°

- AR30 W21 → 34 turns
- AR30 W22 → 14 turns
- AR30 W23 → 29 turns

Outdoor installation

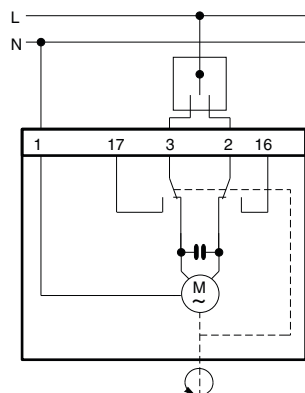
The devices must also be protected from the weather if they are installed outside the building.

Disposal

When disposing of the product, observe the currently applicable local laws.

More information on materials can be found in the Declaration on materials and the environment for this product.

Connection diagram

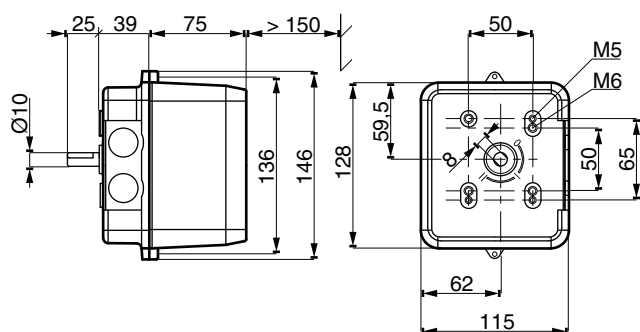


Anti-clockwise direction if voltage on 2 (view from actuator to control unit)

Accessories

370772/001	370780/. . .	370781/. . .

Dimension drawing



Accessories

