MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

GLB341.1E

OPENAIR 10 NM AIR DAMPER ACTUATOR

Used with the applicable Siemens OpenAir GLB actuators configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Official Siemens technical documentation for GLB341.1E

SIEMENS

OpenAir™

Air damper actuators

GLB..1E

Electronic motor driven actuators for open-close, three-position and modulating control

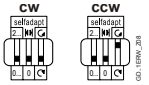
- Nominal torque 10 Nm
- Operating voltage AC 24 V ~ / DC 24…48 V ⎓ or AC 100…240 V ~
- Mechanically adjustable span between 0...90°
- Pre-wired with 0.9 m long connection cables
- Type-specific variations with adjustable offset and span for the positioning signal
- Position indication: mechanical and electrical
- Feedback potentiometer
- Self-adaption of rotational angle range and adjustable auxiliary switches for supplementary functions

Use

The rotary actuators are used in ventilation and air conditioning plants to regulate and shut off air dampers:

- For damper areas up to 1.6 m^2 (guideline, always observe damper manufacturer's data).
- Suitable for use with modulating controllers (DC 0/2...10 V), open-close or three-position controllers for air dampers or air throttles.
- We recommend a minimum pulse length of 500 ms on rotary actuators operated with 3-point control to ensure continuous and accurate operation.

Functions

GLB..	AC 24 V ~ / DC 24…48 V ⎓	**141.1E / 142.1E / 146.1E**	**161.1E / 163.1E / 164.1E / 166.1E**
	AC 100…240 V ~	**341.1E / 346.1E**	**361.1E**
Control type		Open-close / three-position	Modulating control (0/2…10 V)
Rotary direction		Clockwise or counter-clockwise direction depends …	
		… on the type of control … on the setting of the rotary direction switch. With no power applied, the actuator remains in the respective position.	… on the setting of the rotary direction DIL switch  … on the positioning signal. The actuator remains in the achieved position: … if the control signal is maintained at a constant value … for loss of operating voltage.
Position indication: Mechanical		Rotary angle position indication by using a position indicator.	
Position indication: Electrical		The feedback potentiometer can be connected to external voltage to indicate the position.	Output voltage U = DC 0...10 V is generated proportional to the rotary angle. U depends on the rotary direction of the DIL switch setting.
Auxiliary switch		The switching points for auxiliary switches A and B can be set independent of each other in increments of 5° within 0° to 90°.	
Self-adaptation of linear span			When self-adaptation is active, the actuator automatically determines the mechanical end positions of the linear span and maps the characteristic function (Uo, ΔU) to the calculated linear span.
Manual adjustment		The actuator can be manually adjusted by pressing the gear train disengagement button.	
Rotary angle limitation		The rotary angle of the shaft adapter can be limited mechanically with a set screw.	

Technical design

Components

The housing consists essentially of flame retardant, non brominated, non chlorinated glass fibre reinforced plastic.

Actuator motor / Gears

- Brushless, robust DC motors ensure reliable operation regardless of load. The damper actuators do not require an end position switch, are overload proof, and remain in place upon reaching the end stop.
- The gears are maintenance free and low noise.

Type summary

Type	Stock no.	Control	Operating voltage	Positioning signal Y	Position indicator U = DC 0…10 V ▬	Feedback potentio-meter 5 kΩ	Self-adaption of rotational angle range	Aux. switches	Rotary direction switch
GLB141.1E	S55499-D192	Open-close or three-position	AC 24 V ~ / DC 24…48 V ⎓	–	–	–	–	–	yes
GLB142.1E	S55499-D193					yes			
GLB146.1E	S55499-D194					–		2	
GLB341.1E	S55499-D195		AC 100…240 V ~					–	
GLB346.1E	S55499-D196							2	
GLB161.1E	S55499-D270	Modu-lating	AC 24 V ~ / DC 24…48 V ⎓	DC 0/2...10 V ⎓	yes	–	yes	–	yes
GLB163.1E	S55499-D271			DC 0...35 V ⎓	yes		yes		
GLB164.1E	S55499-D272			DC 0...35 V ⎓	yes		yes	2	
GLB166.1E	S55499-D273			DC 0/2...10 V ⎓	yes		yes		
GLB361.1E	S55499-D197		AC 100…240 V ~	DC 0/2...10 V ⎓	yes		yes	–	

Nominal torque: 10 Nm (applies to all GLB..1E actuators)

Accessories

See data sheet N4698

Product documentation

Topic	Title	Document ID
Data sheet	Air damper actuators	A6V10636202_en--_a
Technical basics	Rotary damper actuators without spring return GL..E	A6V10636196_en--_a
Mounting instructions	GDB..1E, GLB..1E	A6V10636143_----_a

Notes

Safety

⚠ Caution

National safety regulations

Failure to comply with national safety regulations may result in personal injury and property damage.

- Observe national provisions and comply with the appropriate safety regulations.
- Use only properly trained technicians for mounting, commissioning, and servicing.