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Damper actuators: OpenAir speaks your language

Long-life, sturdy damper actuators for HVAC applications, air volume control as well as fire and smoke protection dampers

siemens.com/openair

Damper actuators to suit your taste

OpenAir™ is a comprehensive portfolio of damper actuators tailored to suit your requirements. You'll benefit from a wide selection of positioning forces, control signals, communications standards and add-on options. And more advantages: the proven damper actuators are easy to install and extremely durable in operation, during transportation and on the construction site. Low-consumption motors, fast and precise control, and long life cycles ensure noticeable cost and energy efficiency.

Siemens is also an experienced, reliable partner who supports you with a wide range of training services, practical tools and powerful support.

When efficiency meets maximum benefit

OpenAir: a range that meets all your needs

Energy-efficient, simple, flexible and reliable: Your benefits are at the heart of the entire damper actuator range, from smooth installation and rapid commissioning to operation that is both efficient and convenient. You save both time and costs by having a standardized wiring plan, for example, and a self-centering shaft adapter. Four proven housing sizes cover all HVAC applications, even in highly challenging installations like air-conditioning units in trains.

You'll be won over by the many convenient features

Once it's up and running, OpenAir proves to be a winner, in a satisfyingly understated way. Brushless motors and gearboxes that have already been run in guarantee especially quiet yet high-performance and extraordinarily long-lasting operation. The fast and accurate response to building automation commands also helps ensure a stable and even more comfortable indoor climate.

Quality, experience and total support for practical application

More than 13 million damper actuators sold since 1975 underscore the quality of OpenAir in building and room automation. You get additional services during operation – for example, with many smart tools, direct support and a global sales and service network.

The future of construction

Boost your efficiency by using BIM(Building Information Modeling) for planning. The holistic process that is transforming planning, construction and management of buildings and infrastructures accelerates amongst others construction and early error detection.
siemens.com/bim-data

Our goal is to create perfect places – with the right building automation technologies, tools, and services that will help our customers to better reach their individual goals more quickly and easily. This encompasses short innovation cycles as well as the fulfillment of stricter security requirements and the growing importance of energy efficiency and sustainability.
#CreatingPerfectPlaces
siemens.com/perfect-places

Highlights

- The right damper actuator for every application
- Rapid installation, maximum reliability, long service life
- Low-consumption motors, maximum precision, convenience you can feel

Perfect for environments where quiet is especially important: the reliable and powerful OpenAir actuator for HVAC applications

Air damper actuators: Save time and costs with OpenAir

Highlights

- Always the right option for your application
- Accurate and reliable while also saving costs
- Easy to install and highly efficient

Powerful actuators for HVAC applications

Are installation difficulties your biggest challenge? Or unusual locations? And are costs still a major determining factor for you? Stay on the safe side with the OpenAir air damper actuators – always right for your application.

Air damper actuators for HVAC applications are available in torque ranges from 2 to 35 Nm and with lifting forces from 125 to 250 N. Even in challenging locations where space is tight, for example, in false floors, ease of mounting is guaranteed – and so is maximum safety.

Easy to install, easy to integrate

Thanks to self-centering shaft adapters, you can keep your installation outlay to a minimum and eliminate mounting errors entirely. The new actuators with Modbus RTU offer even more advantages. They can be easily integrated into existing systems. Your wiring costs are kept low because there's no need for point-to-point wiring. High energy efficiency and ease of maintenance let you realize even more cost-reduction potentials.

Actuators for HVAC applications	Control signal	Operating voltage	Standard model	Feedback potentio-meter (1 kOhm)	Adjustable offset/span	Adjustable offset/span with two auxiliary switches	Feedback (1 kOhm) with two auxiliary switches	Two auxiliary switches	Dimensions, round damper shaft (mm)	Dimensions, square damper shaft (mm)
Damper actuators with spring return										
 **GQD-series** 2 Nm for approx. 0,3 m² damper area 30 s run time 15 s SR time	2-position	AC/DC 24 V	GQD121.1A	–	–	–	–	GQD126.1A	8...15	6...11
		AC 230 V	GQD321.1A	–	–	–	–	GQD326.1A		
	3-position	AC/DC 24 V	GQD131.1A	–	–	–	–	GQD136.1A		
	Modulating DC 0...10 V	AC/DC 24 V	GQD161.1A	–	–	–	–	GQD166.1A		
 **GPC-series** 4 Nmfor approx. 0,6 m² damper area 60 s run time 15 s SR time	2-position	AC/DC 24 V	GPC121.1A	–	–	–	–	GPC126.1A	8...15	6...11
		AC 230 V	GPC321.1A	–	–	–	–	GPC326.1A		
	3-position	AC/DC 24 V	GPC131.1A	–	–	–	–	GPC136.1A		
	Modulating DC 0...10 V	AC/DC 24 V	GPC161.1A	–	–	–	–	GPC166.1A		
	Modulating DC 0...10 V	AC 230 V	GPC361.1A	–	–	–	–	–		
 **GNP-series** 6 Nm for approx. 1 m² damper area 2 s run time el. fail-safe function	2-position 3-position	AC/DC 24 V	GNP191.1E	–	–	–	–	GNP196.1E	6,4...20,5	6,4...13
	Modulating DC 0/2...10 V 0/4...20 mA	AC/DC 24 V	GNP191.1E	–	–	–	–	GNP196.1E		
 **GMA-series** 7 Nm for approx. 1,5 m² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V	GMA121.1E	–	–	–	–	GMA126.1E	6,4...20,5	6,4...13
		AC 230 V	GMA321.1E	–	–	–	–	GMA326.1E		
	3-position	AC/DC 24 V	GMA131.1E	GMA132.1E	–	–	–	GMA136.1E		
	Modulating DC 0...10 V	AC/DC 24 V	GMA161.1E	–	GMA163.1E	GMA164.1E	–	GMA166.1E		
	Modbus RTU	AC 24 V	GMA161.1E/MO	–	–	–	–	–		
 **GCA-series** 18 Nm for approx. 3 m² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V	GCA121.1E	–	–	–	–	GCA126.1E	8...25,6	6...18
		AC 230 V	GCA321.1E	–	–	–	–	GCA326.1E		
	3-position	AC/DC 24 V	GCA131.1E	–	–	–	GCA135.1E	–		
	Modulating DC 0...10 V	AC/DC 24 V	GCA161.1E	–	GCA163.1E	GCA164.1E	–	GCA166.1E		
	Modbus RTU	AC 24 V	GCA161.1E/MO	–	–	–	–	–		
Damper actuators without spring return										
 **GSD-series** 2 Nm for approx. 0,3 m² damper area 30 s run time	2-position 3-position	AC/DC 24 V AC 230 V	GSD141.1A GSD341.1A	–	–	–	–	GSD146.1A GSD346.1A	8...15	6...11
	Modulating DC 0...10 V	AC/DC 24 V	GSD161.1A	–	–	–	–	GSD166.1A		
	Modulating DC 0...10 V	AC 230 V	GSD361.1A	–	–	–	–	–		
 **GDB-series** 5 Nm for approx. 0,8 m² damper area 150 s run time	2-position 3-position	AC/DC 24 V AC 230 V	GDB141.1E GDB341.1E	GDB142.1E –	– –	– –	– –	GDB146.1E GDB346.1E	8...16	6...12,8
	Modulating DC 0...10 V	AC/DC 24 V AC 230 V	GDB161.1E GDB361.1E	– –	GDB163.1E –	GDB164.1E –	– –	GDB166.1E –		
	Modbus RTU	AC 24 V	GDB111.1E/MO	–	–	–	–	–		
 **GLB-series** 10 Nm for approx. 1,5 m² damper area 150 s run time	2-position 3-position	AC/DC 24 V AC 230 V	GLB141.1E GLB341.1E	GLB142.1E –	– –	– –	– –	GLB146.1E GLB346.1E	8...16	6...12,8
	Modulating DC 0...10 V	AC/DC 24 V AC 230 V	GLB161.1E GLB361.1E	– –	GLB163.1E –	GLB164.1E –	– –	GLB166.1E –		
	Modbus RTU	AC 24 V	GLB111.1E/MO	–	–	–	–	–		
 **GAP-series** 6 Nm for approx. 1 m² damper area 2 s run time	2-position 3-position	AC/DC 24 V	GAP191.1E	–	–	–	–	GAP196.1E	6,4...20,5	6,4...13
	Modulating DC 0/2...10 V 0/4...20 mA	AC/DC 24 V	GAP191.1E	–	–	–	–	GAP196.1E		
 **GEB-series** 15 Nm for approx. 3 m² damper area 150 s run time	3-position	AC 24 V	GEB131.1E	GEB132.1E	–	–	–	GEB136.1E	6,4...20,5	6,4...13
		AC 230 V	GEB331.1E	GEB332.1E	–	–	–	GEB336.1E		
	Modulating DC 0...10 V	AC 24 V	GEB161.1E	–	GEB163.1E	GEB164.1E	–	GEB166.1E		
	Modbus RTU	AC 24 V	GEB161.1E/MO	–	–	–	–	–		
 **GBB-series** 25 Nm for approx. 4 m² damper area 150 s run time	3-position	AC 24 V	GBB131.1E	–	–	–	GBB135.1E	GBB136.1E	8...25,6	6...18
		AC 230 V	GBB331.1E	–	–	–	GBB335.1E	GBB336.1E		
	Modulating DC 0...10 V	AC 24 V	GBB161.1E	–	GBB163.1E	GBB164.1E	–	GBB166.1E		
 **GIB-series** 35 Nm for approx. 6 m² damper area 150 s run time	3-position	AC 24 V	GIB131.1E	–	–	–	GIB135.1E	GIB136.1E	8...25,6	6...18
		AC 230 V	GIB331.1E	–	–	–	GIB335.1E	GIB336.1E		
	Modulating DC 0...10 V	AC 24 V	GIB161.1E	–	GIB163.1E	GIB164.1E	–	GIB166.1E		
	Modbus RTU	AC 24 V	GIB161.1E/MO	–	–	–	–	–		
 **GDB-series** 125 N for approx. 0,8 m² damper area 150 s run time	3-position	AC 24 V	GDB131.2E	–	–	–	–	GDB136.2E	–	–
		AC 230 V	GDB331.2E	–	–	–	–	GDB336.2E		
	Modulating DC 0...10 V	AC 24 V	GDB161.2E	–	GDB163.2E	–	–	–		
 **GLB-series** 250 N for approx. 1,5 m² damper area 150 s run time	3-position	AC 24 V	GLB131.2E	–	–	–	–	GLB136.2E	–	–
		AC 230 V	GLB331.2E	–	–	–	–	GLB336.2E		
	Modulating DC 0...10 V	AC 24 V	GLB161.2E	–	GLB163.2E	–	–	–		

Networked OpenAir VAV controllers guarantee interoperability thanks to the standardized and open communications protocols. As a result, the VAV controllers can be installed in any system, even those made by different manufacturers.

Actuator for air volume control 300 Pa application range		Control signal	Operating voltage	Standard model	Dimensions round damper shaft (mm)	Dimensions square damper shaft (mm)
	**GDB 300 Pa VAV compact controller** 5 Nm for approx. 0.8 m² damper area 150 s run time	3-position	AC 24 V	GDB181.1E/3	8...16	6...12.8
		Modulating, DC 0/2...10 V	AC 24 V			
		KNX S-/LTE-Mode, KNX PL-Link	AC 24 V	GDB181.1E/KN		
		Modbus RTU	AC 24 V	GDB181.1E/MO		
		BACnet MS/TP	AC 24 V	GDB181.1E/BA		
	**GLB 300 Pa VAV compact controller** 10 Nm for approx. 1.5 m² damper area 150 s run time	3-position	AC 24 V	GLB181.1E/3	8...16	6...12.8
		Modulating, DC 0/2...10 V	AC 24 V			
		KNX S-/LTE-Mode, KNX PL-Link	AC 24 V	GLB181.1E/KN		
		Modbus RTU	AC 24 V	GLB181.1E/MO		
		BACnet MS/TP	AC 24 V	GLB181.1E/BA		
	**ASV 300 Pa VAV modular**	3-position	AC 24 V	ASV181.1E/3	–	–
		Modulating, DC 0/2...10 V	AC 24 V			

VAV controller: OpenAir offers more possibilities, more convenience

Highlights

- With all common communications standards
- Fast, simple adjustment to VAV boxes
- Precise and stable differential pressure measurement

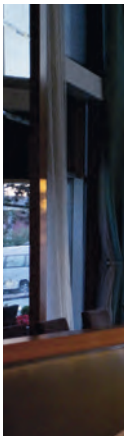
Superior actuators for air volume control

Reduced outlay, increased convenience: That neatly summarizes the solid benefits the OpenAir VAV controllers offer. It's all made possible thanks to maximum precision, excellent stability and winning flexibility – including the ability to respond rapidly to changed requirements.

Practical installation, varied application

Fast and simple adjustment to VAV boxes makes complicated and time-consuming installation a thing of the past. And because all common communications standards are accommodated and the VAV modular controller turns every 3-position actuator into a VAV actuator, you get to enjoy a much greater range of application than ever before.

The AST20 handheld operating unit for all VAV controllers offers a handy, ergonomic design. It makes both commissioning and maintenance easier, thanks to its intuitive menu system and its easy-to-follow screen.



Actuators for fire and smoke-protection dampers	Control signal	Operating voltage	Two auxiliary switches	Two auxiliary switches and thermal cut-out	Dimensions, square damper shaft (mm)
 **GRA actuator** 4 Nm for approx. 0.6 m² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V AC 230 V	GRA126.1E/..[1)] GRA326.1E/..[1)]	GRA126.1E/T..[1)] GRA326.1E/T..[1)]	10, 12
 **GNA actuator** 9/7 Nm for approx. 1 m² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V AC 230 V	GNA126.1E/..[1)] GNA326.1E/..[1)]	GNA126.1E/T..[1)] GNA326.1E/T..[1)]	10, 12
 **GGA actuator** 18 Nm for approx. 2.5 m² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V AC 230 V	GGA126.1E/..[1)] GGA326.1E/..[1)]	GGA126.1E/T..[1)] GGA326.1E/T..[1)]	10, 12

1) .. = use dimensions for square damper shaft (mm)

Actuators for fire and smoke protection dampers: Maximum safety with OpenAir

Reliable actuators for fire and smoke protection dampers

Safety when it matters: The OpenAir actuators function with reassuring reliability at a sensitive interface between humans and safety systems. After all, in an emergency it's extremely important to keep escape routes and emergency exits free from smoke as long as possible, even if there's a power outage or in special applications.

Powerful and safe opening and closing

Three powerful torque levels ensure that the dampers open and close rapidly and reliably. Two integrated auxiliary switches provide maximum safety in reporting the damper position.

Highlights

- Three powerful torque levels, thermal cut-out at 72° C or 95° C
- Fast, easy and safe to install
- robust housing for high endurance

Actuator for railway applications		Control signal	Operating voltage	Standard model	Feedback potentiometer	Two integrated auxiliary switches	Rotary direction switch
	**GDD-series** 5 Nm 30 s run time	Modulating DC 0/2 ...10 V	DC 24 V	GDD161.1E/RW	–	–	Yes
		2-position 3-position		GDD141.1E/RW	GDD142.1E/RW	GDD146.1E/RW	
	**GDA-series** 5 Nm 90 s run time	Modulating DC 0/2 ...10 V	DC 24 V	GDA161.1E/RW	–	–	Yes
		2-position 3-position		GDA141.1E/RW	GDA142.1E/RW	GDA146.1E/RW	
	**GLD-series** 8 Nm 30 s run time	Modulating DC 0/2 ...10 V	DC 24 V	GLD161.1E/RW	–	–	Yes
		2-position 3-position		GLD141.1E/RW	GLD142.1E/RW	GLD146.1E/RW	
	**GLA-series** 10 Nm 90 s run time	Modulating DC 0/2 ...10 V	DC 24 V	GLA161.1E/RW	–	–	Yes
		2-position 3-position		GLA141.1E/RW	GLA142.1E/RW	GLA146.1E/RW	

Damper actuators for rail vehicles: OpenAir fits everywhere

Highlights

- Complies with all standards
- High reliability even under harsh condition
- Extremely compact devices

Certified and customized to individual requirements

With OpenAir, we offer high-tech damper actuators that comply with all necessary standards (EN 50155, EN 45545, EN 61373) for use in rail vehicles. To make your work easier, we provide the actuators with pre-mounted connectors of your choice and with the desired cable length.

Safe everywhere

The circuit boards, which are completely covered with a protective coating, and the very broad temperature operating range (of -40 to +85 °C) ensure maximum reliability and flexibility. The housing is also extremely compact, since the two auxiliary switches for signaling the damper position are integrated.

Robust housings, high reliability, strong performance: The OpenAir actuator range is perfectly structured for ease of installation and efficient long-term operation.

OpenAir delivers what you need

Configure actuators to meet your requirements

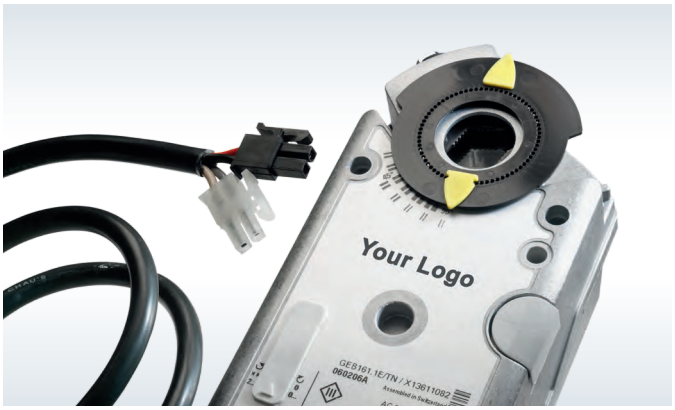
If you have very specific requirements, you can easily use the product configurator in the Siemens Industry Mall to configure the right OpenAir actuator for your needs and order it directly. Your Siemens contact will of course be happy to help if you have additional requirements or want to place a large order.

Your configuration options

There's a choice of two labels and you can use your own company logo. You can also choose the cable type and length (up to five meters) to fit your requirements. A selection of connectors is also available.

Highlights

- Actuators that are just right – made to suit your requirements
- Your own logo can be included if required
- Ordering is quick and easy



OpenAir – simple, robust and strong in everyday use

Fast and easy mounting

Damper actuators have to sell themselves right from the start – in terms of availability and installation as well as long-term use. You'll love the OpenAir as soon as you discover how easily it can be installed, thanks to its sturdy housing and a well-thought-out wiring concept, as well as its self-centering shaft adapter that can be installed with just a single screw.

The basic, proven features like color and number coding for the cables and the wiring diagram on the labels also help avoid errors during the installation process.

High quality ensures a long and reliable service life

The efficient OpenAir damper actuators will continue to prove their worth, because costs will always be one of the key issues in building automation into the future. The benefits of the high quality of this series are tangible, as you can see not only from their extremely long product lifecycle but also from their economical low-consumption motors.

Highlights

- The right damper actuator for every application
- Easy and fast installation and commissioning
- High quality and extremely long product lifecycle

Practical support

BIM – Building Information Modeling

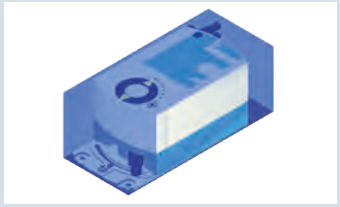
BIM made easy with Siemens: With a wide range of products for BIM-based planning, Siemens is making it easy for you to experience the future of construction.
BIM data is available in the pioneering REVIT format. They can be downloaded quickly and easily, used directly and converted to IFC.
siemens.com/bim-data

HIT Portal

The HIT Portal spares you the time-consuming search for the right products when you're designing HVAC systems. The tool offers more than 400 preconfigured standard HVAC configurations, all classified by their potential energy savings in accordance with EN 15232. That means you can select the application that best meets the desired efficiency class. Extensive specifications are available, including system diagrams, lists of materials and technical documentation for each device.
Try it out: **siemens.com/hit**

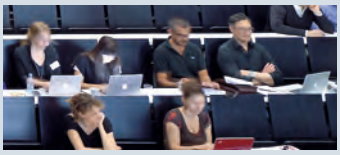
Scan to HIT

This app lets you scan the data matrix code on the actuators to obtain immediate access to all important product information, including data sheets and installation instructions. The app for iOS and Android is free from the respective app stores.



VDI data records

The VDI3805/ISO16757 data records make it even easier to select and plan your field devices. The product data records meet the requirements of the applicable VDI/ISO standard. Siemens also makes all CAD data and specification texts available in a DATANORM-compliant format. 2D and 3D views of product geometries in different data formats as well as representation of interference spaces for collision control simplify planning and prevent errors.



Training sessions

Draw on the accumulated knowledge of the experts at Siemens! Siemens is there to help: Its BT Academy provides training sessions in specialist subjects (for example, hydronics) and product-related training. Your Siemens contact will help you register.

Everything optimally controlled: OpenAir in daily use

Comfortable indoor climate and high energy efficiency

In Bergen, Norway, OpenAir damper actuators help maintain a comfortable indoor climate – and help keep energy consumption (electricity, heating, cooling) down at the same time. Siemens Solution Partner Bautec AS has equipped its newly constructed Sjølivet office and industrial building with VAV compact controllers. With intelligent controlling provided by Siemens' Desigo™ building management system, eight large air handling units provide the variable air volume system with fresh air at a pleasant temperature to meet the requirements in every room. The system uses a total of 570 VAV compact controllers. Communication via KNX PL-Link helps the VAV compact controllers integrate seamlessly into the Desigo system, and the tested AirOptiControl application ensures maximum energy efficiency.

VAV compact controller in the Sjølivet office and industrial building in Bergen

A winning overall package offering energy efficiency, safety and security

The Sofia Ring Mall in Bulgaria's capital city is a large shopping center with 200 stores and 3,500 parking spaces. In addition to a wide range of shopping opportunities, the mall offers the country's largest indoor amusement park and its longest go-kart circuit. Siemens Solution Partner New System Ltd. and Protech Jsc. installed OpenAir damper actuators in the heating and cooling system and in the 31 air handling units in the mall. The entire HVAC system is controlled using Siemens' Desigo building management system.

This ensures that the air is perfect for mall customers and employees at all times – and energy costs are kept low. More Siemens components provide both safety and security: the Cerberus Pro fire safety system, the Sinorix 227 extinguishing system and the SiPass and Vectis security systems. This project shows how maximum energy efficiency, safety and security can be achieved when all the building technology elements work together perfectly.

OpenAir and more in the Sofia Ring Mall

When building technology creates perfect places –
that's Ingenuity for life.

Never too cold. Never too warm.
Always safe. Always secure.

With our knowledge and technology, our products,
our solutions and our services, we turn places into
perfect places.

We create perfect places for their users' needs –
for every stage of life.

#CreatingPerfectPlaces
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Article no. 0-92206-en (Status 09/2017)