



OpenAir™

## Fast running actuators for air dampers

## GNP19...

Fast runner rotary version with electronic fail-safe function, AC/DC 24 V

**Electronic rotary actuator for 2-position, 3-position, or modulating control, nominal torque 6 Nm, at 2 s running time, with electronic fail-safe function; self-centering shaft adapter, range mechanically adjustable between 0...90°, prewired with 0.9 m long standard connection cables.**

**GNP196.1E with adjustable auxiliary switches for auxiliary functions.**

### Use

- For damper areas up to 1 m<sup>2</sup>, friction dependent.
- For laboratory fume hoods, etc.
- Suitable for use with continuous, 2-position, or 3-position controllers.

Архангельск (8182)63-90-72  
Астана +7(7172)727-132  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78

Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

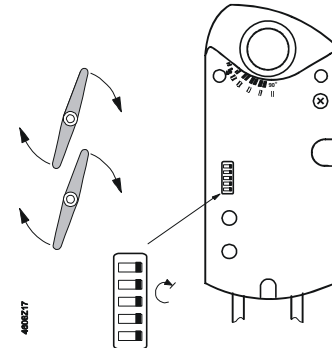
## Type summary

Types	Power	Auxiliary switch	Torque	Damper size	Runtime
GNP191.1E	AC/DC 24 V	No	6 Nm	Ca. 1 m <sup>2</sup>	2 s
GNP196.1E		Yes			

### Factory setting

The actuators preset at the factory to:

- 0... 10 V
- Clockwise rotary movement
- Counter-clockwise fail-safe movement



## Functions





DIL switch setting		A DIL switch is used to set the actuator's functionality.			
Siemens default setting	Modulating control		2-position control	3-position control	

<b>Position indication: Mechanical</b>	Rotary angle position.
<b>Position indication: Electric.</b>	Output voltage $U = DC\ 0...10\ V$ is generated proportional to rotary angle. $U$ depends on the DIL switch's rotary direction position.
<b>Rotary angle limitation</b>	The rotary angle of the shaft adapter can be limited mechanically to 5° increments.
<b>GNP196.1E auxiliary switch</b>	The switching points for auxiliary switches A and B can be set mutually independent in 5° increments from 0 to 90°.

## Ordering

Delivery	Individual parts such as shaft adapter with position indication and other mounting materials for the actuator are delivered <b>unassembled</b> .
Accessories, spare parts	Various accessories are available to extend the actuators' functionality; e.g. rotary/linear mounting kit, external auxiliary switch (1 or 2 switches) and weather shield; see data sheet <b>N4697</b> .

## Technical data

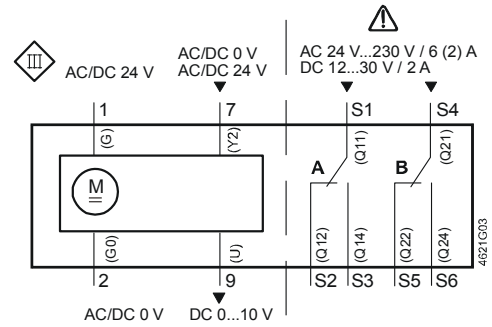
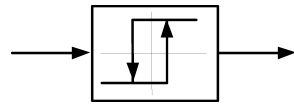
 24 VAC/VDC supply (SELV/PELV)	Operating voltage / Frequency	AC/DC 24 V $\pm$ 20 % / 50/60 Hz	
	Power consumption:	Actuator running Hold	20 VA / 13 W 5 W
Functional data	Nominal torque	6 Nm	
	Maximum torque (when blocked)	18 Nm	
	Nominal rotary angle / max. rotary angle	90° / max. 95° $\pm$ 2°	
	Runtime for 90° rotary angle	2 s (50 Hz)	
Positioning signal Y/Y1	Input voltage Y/Y1+ (wires 8-2)	DC 0 (2)...10 V / 0 (4)...20 mA or AC/DC 0 V , AC/DC 24 V "open"	
	Positioning resolution for DC 0 (2)...10 V / 0 (4)...20 mA Max. permissible input voltage	250 steps for 90° AC/DC 24 V $\pm$ 20 %	
Positioning signal Y2	Input voltage Y2+ (wires 7-2)	AC/DC 0 V , AC/DC 24 V "close"	
	Max. permissible input voltage	AC/DC 24 V $\pm$ 20 %	
Position indicator	Output voltage U (wires 9-2)	DC 0 (2)...10 V	
	max. output current	DC $\pm$ 1 mA	
 Auxiliary switch for GAP196	Contact loading	6 A resistive, 2 A inductive	
	Voltage (no mixed operation 24 VAC / 230 VAC)	AC 24...230 V	
	Switching range for auxiliary switches	5°...90°	
	Setting increments	5°	
Connection cable	Cross-section	0.75 mm <sup>2</sup>	
	Standard length	0.9 m	
Housing type	Protection class as per EN 60 529 (observe mounting notes)	IP 54	
Protection class	Insulation class	EN 60 730	
	230 VAC, auxiliary switch	II	
Environmental conditions	Operation / Transport	IEC 721-3-3 / IEC 721-3-2	
	Temperature Humidity (non-condensing)	-32...+50 °C / -32...+70 °C < 95% r.h. / < 95% r.h.	
Standards, guidelines	Product safety: Automatic electronic controls for household and similar use	EN 60 730-2-14 (Type 1)	
	Electromagnetic compatibility (EMC)		
	Immunity	IEC/EN 61 000-6-2	
	Emissions	IEC/EN 61 000-6-3	
	 Conformity		
	Electromagnetic compatibility	2004/108/EC	
	Low-voltage directive	2006/95/EC	
 Conformity			
Australian EMC Framework	Radio Communication Act 1992		
Radio Interference Emission Standard	AS/NZS 3548		
Dimensions	Actuator W x H x D (see Dimensions)	81 x 192 x 63 mm	
	Damper shaft:	Round	6.4...20.5 mm
		Square	6.4...13 mm
	Min. shaft length	20 mm	
Weight	Excl. packaging	1.230 kg	

## Disposal

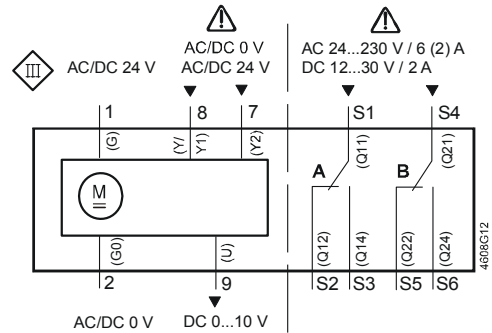
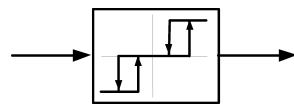
See "Technical basics" and the environmental declaration for information on environmental compatibility and device disposal.

## Internal diagrams

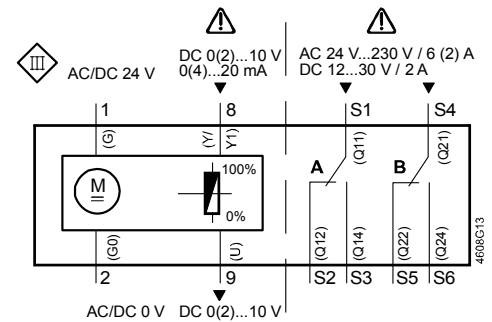
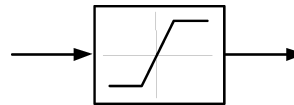
### 2-position control



### 3-position control



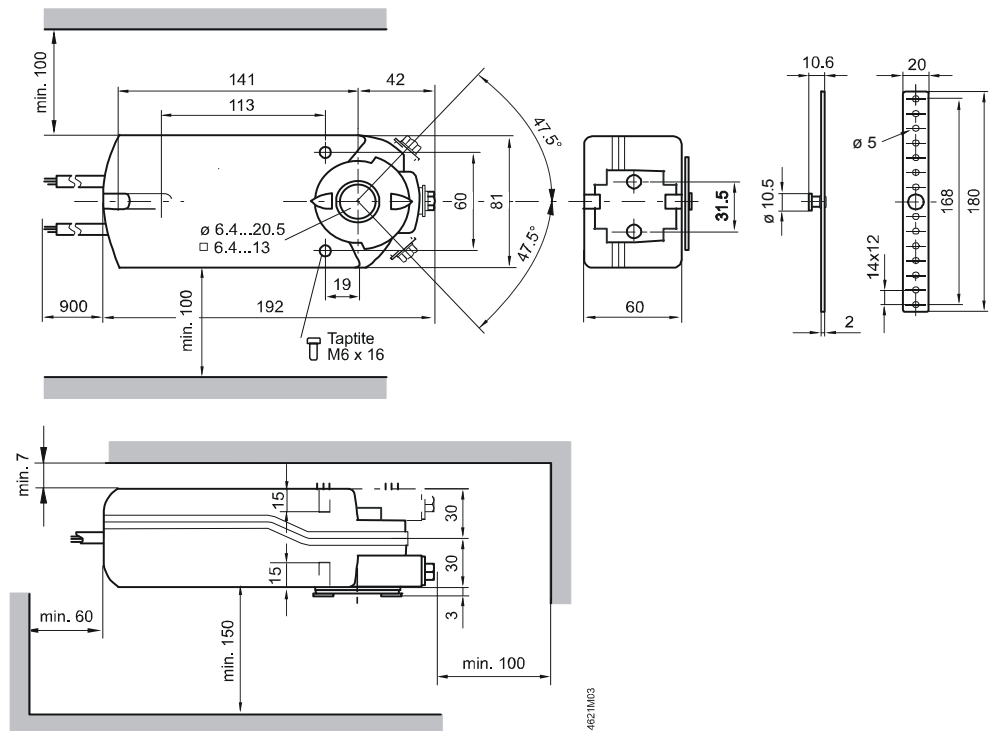
### Modulating control



## Cable designations

Pin	Cable				Meaning
	Code	No.	Color	Abbreviation	
Actuators AC/DC 24 V	G	1	Red	RD	AC/DC 24 V system potential
	G0	2	Black	BK	System neutral
	Y2	7	orange	OG	Pos. signal AC/DC 0 V, AC/DC 24 V "close"
	Y/Y1	8	gray	GY	Pos. signal DC 0 (2)...10 V / 0 (4)...20 mA or
	U	9	pink	PK	Pos. signal AC/DC 0 V, AC/DC 24 V "open"
Auxiliary switch	Q11	S1	gray/red	GYRD	Switch A input
	Q12	S2	gray/blue	GYBU	Switch A Normally closed contact
	Q14	S3	gray/pink	GYPK	Switch A Normally open contact
	Q21	S4	black/red	BKRD	Switch B input
	Q22	S5	black/blue	BKBU	Switch B Normally closed contact
	Q24	S6	black/pink	BKPK	Switch B Normally open contact

## Dimensions



Dimensions in mm

Архангельск (8182)63-90-72  
 Астана +7(7172)727-132  
 Белгород (4722)40-23-64  
 Брянск (4832)59-03-52  
 Владивосток (423)249-28-31  
 Волгоград (844)278-03-48  
 Вологда (8172)26-41-59  
 Воронеж (473)204-51-73  
 Екатеринбург (343)384-55-89  
 Иваново (4932)77-34-06  
 Ижевск (3412)26-03-58  
 Казань (843)206-01-48

Калининград (4012)72-03-81  
 Калуга (4842)92-23-67  
 Кемерово (3842)65-04-62  
 Киров (8332)68-02-04  
 Краснодар (861)203-40-90  
 Красноярск (391)204-63-61  
 Курск (4712)77-13-04  
 Липецк (4742)52-20-81  
 Магнитогорск (3519)55-03-13  
 Москва (495)268-04-70  
 Мурманск (8152)59-64-93  
 Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
 Новокузнецк (3843)20-46-81  
 Новосибирск (383)227-86-73  
 Орел (4862)44-53-42  
 Оренбург (3532)37-68-04  
 Пенза (8412)22-31-16  
 Пермь (342)205-81-47  
 Ростов-на-Дону (863)308-18-15  
 Рязань (4912)46-61-64  
 Самара (846)206-03-16  
 Санкт-Петербург (812)309-46-40  
 Саратов (845)249-38-78

Смоленск (4812)29-41-54  
 Сочи (862)225-72-31  
 Ставрополь (8652)20-65-13  
 Тверь (4822)63-31-35  
 Томск (3822)98-41-53  
 Тула (4872)74-02-29  
 Тюмень (3452)66-21-18  
 Ульяновск (8422)24-23-59  
 Уфа (347)229-48-12  
 Челябинск (351)202-03-61  
 Череповец (8202)49-02-64  
 Ярославль (4852)69-52-93