



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.

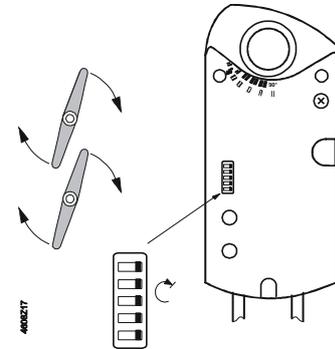
## Type summary

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>DC 0..10 V</b> 	<b>DC 2..10 V</b> 	<b>0..20 mA</b> 	<b>4..20 mA</b> 	<b>2-Pt</b> 

<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 ± 20 % / 50/60 Hz
	Power consumption:	Actuator running Hold
Functional data	Nominal torque	6 Nm
	Maximum torque (when blocked)	18 Nm
	Nominal rotary angle / max. rotary angle	90° / max. 95° ± 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	250 steps for 90 °
Positioning signal Y2	Max. permissible input voltage	AC/DC 24 V ± 20 %
	Input voltage Y2+ (wires 7-2)	AC/DC 0 V , AC/DC 24 V "close"
Position indicator	Max. permissible input voltage	AC/DC 24 V ± 20 %
	Output voltage U (wires 9-2)	DC 0 (2)...10 V
⚠ Auxiliary switch for GAP196	max. output current	DC ± 1 mA
	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°
Connection cable	Setting increments	5°
	Cross-section	0.75 mm <sup>2</sup>
Housing type	Standard length	0.9 m
	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	-32...+50 °C / -32...+70 °C
Standards, guidelines	Humidity (non-condensing)	< 95% r.h. / < 95% r.h.
	Product safety: Automatic electronic controls for household and similar use	EN 60 730-2-14 (Type 1)
	Electromagnetic compatibility (Application)	For residential, commercial and industrial environments
	EU Conformity (CE)	A5W00004382 <sup>1)</sup>
Dimensions	RCM Conformity	A5W00004383 <sup>1)</sup>
	Product environmental declaration <sup>2)</sup>	CE1E4608en <sup>1)</sup>
	Actuator W x H x D (see Dimensions)	81 x 192 x 63 mm
	Damper shaft:	Round
Square		6.4...13 mm
Weight	Min. shaft length	20 mm
	Excl. packaging	1.230 kg

<sup>1)</sup> The documents can be downloaded from <http://siemens.com/bt/download>

<sup>2)</sup> The product environmental declarations contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

## Disposal

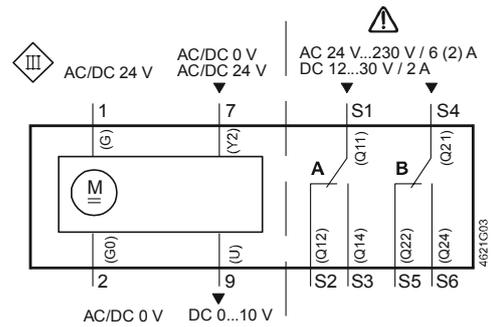
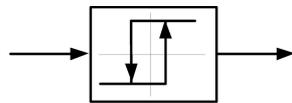


The device is considered an electronics device for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic garbage.

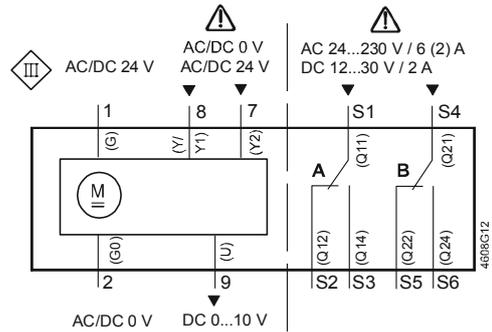
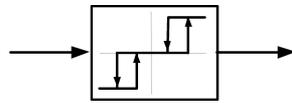
- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

## Internal diagrams

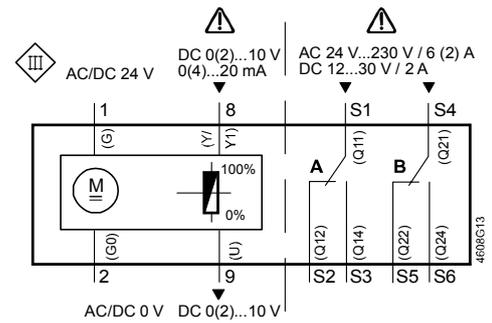
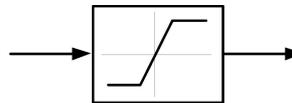
### 2-position control



### 3-position control



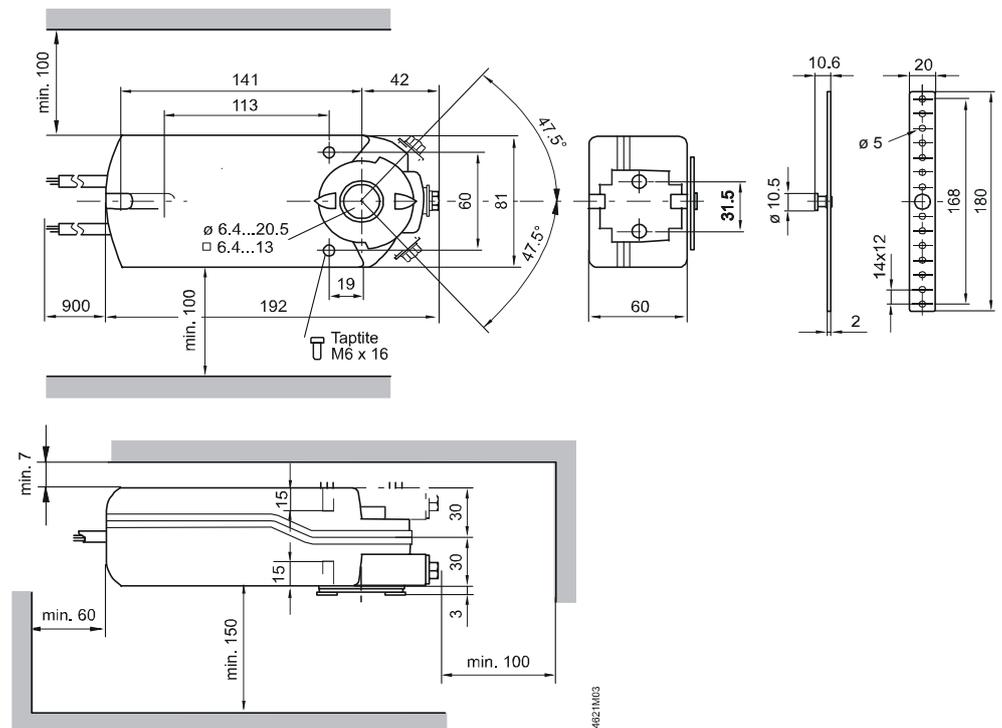
### Modulating control



## 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 Pos. signal AC/DC 0 V, AC/DC 24 V "open"
	U	9	pink	PK	Position indication DC 0 (2)...10 V
Auxiliary switch	Q11	S1	gray/red	GYRD	Switch A input
	Q12	S2	gray/blue	GYBU	Switch A Normally closed contract
	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

Issued by  
Siemens Switzerland Ltd  
Building Technologies Division  
International Headquarters  
Gubelstrasse 22  
6301 Zug  
Switzerland  
Tel. +41 41-724 24 24  
[www.siemens.com/buildingtechnologies](http://www.siemens.com/buildingtechnologies)

© Siemens Switzerland Ltd, 2010  
Technical specifications and availability subject to change without notice.