



OpenAir™

## Fast running actuators for air dampers

## GNP19...

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

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**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

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- 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.

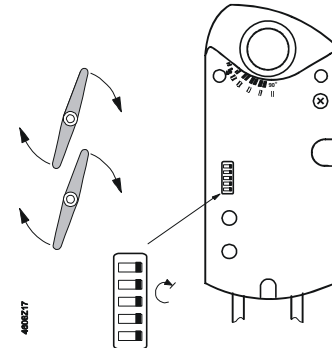
## Type summary

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>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> .

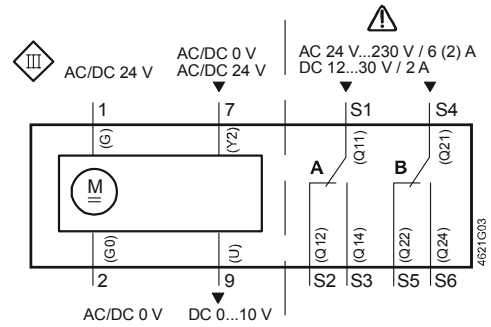
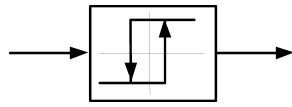
## Technical data

⚠ 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"	
	Max. permissible input voltage	AC/DC 24 V ± 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 ± 20 %	
Position indicator	Output voltage U (wires 9-2)	DC 0 (2)...10 V	
	max. output current	DC ± 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	-32...+50 °C / -32...+70 °C	
	Humidity (non-condensing)	< 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	
	CE 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	

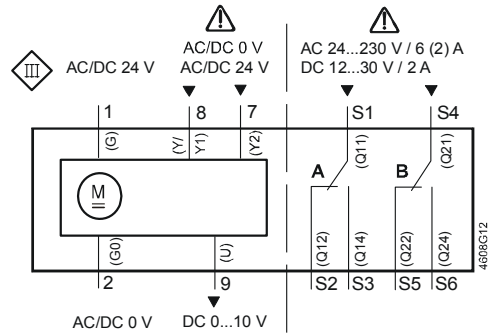
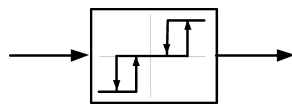
## Disposal

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

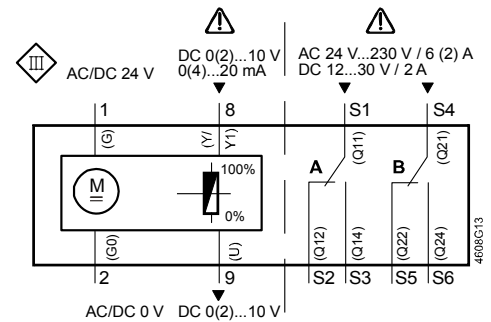
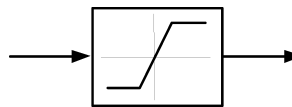
2-position control



3-position control



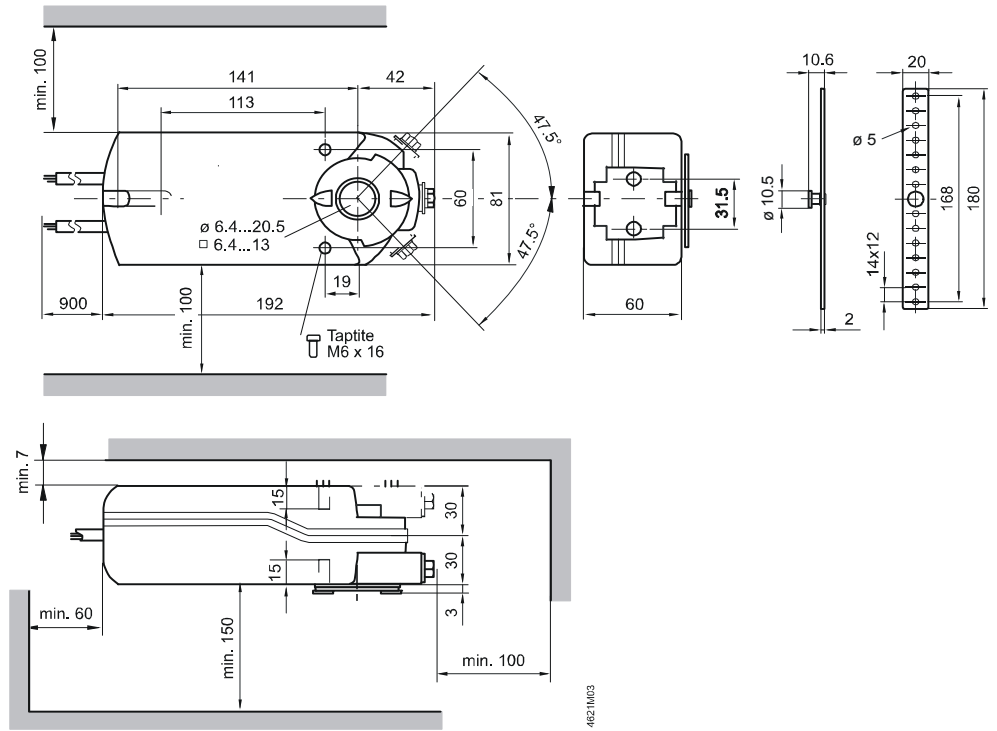
Modulating control



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" 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 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