



OpenAir™

Air damper actuators

GBB...2

Electronic motor-driven linear actuators for three-position and modulating control

- AC 24 V / AC 230 V
- Nominal force 550 N
- Travel 75 mm, mechanical adjustable
- Connection cables PVC, 0.9 m

Type-specific variations:

- Adjustable offset and span (Positioning signal)
- Position indicator
- 2 adjustable auxiliary switches

Remarks

This data sheet provides a brief overview of these actuators. Please refer to the Technical Basics in document Z4656E for a detailed description as well as information on safety, engineering notes, mounting and commissioning.

Use

- For damper areas up to 4 m², friction-dependent.
- Suitable for modulating controllers (DC 0...10 V) or three-position controllers (e.g. rotary and linear dampers at air outlets).

Type summary

GBB....	131.2E	136.2E	331.2E	336.2E	161.2E	163.2E
Control type	Three-position control				Modulating control	
Operating voltage AC 24 V	X	X			X	X
Operating voltage AC 230 V			X	X		
Positioning signal Y DC 0...10 V					X	
DC 0...35 V with characteristic function U _o , ΔU						X
Position indicator DC 0...10 V					X	X
Auxiliary switches (two)		X		X		
Linear direction switch					X	X

Functions

Type	GBB13..2 / GBB33..2	GBB16..2
Control type	Three-position control	Modulating control
Positioning signal with adjustable characteristic function		DC 0...35 V at Offset U _o = 0...5 V Span ΔU = 2...30 V
Linear travel direction	The direction of linear travel depends on... ...the type of control. With no power applied, the actuator remains in the respective position.	
Position indication		Position indicator: Output voltage U = DC 0...10 V is generated proportional to the linear travel. U depends on the linear direction of the switch setting.
Auxiliary switch	The switching points for auxiliary switches A and B can be set independent of each other in increments of 4 between 4 and 66.8 mm.	

Ordering

Note

Auxiliary switches **cannot be added in the field**.

Accessories, spare parts

Accessories to functionally extend the actuators are available, e.g., various linear/rotary sets; see data sheet **N4699**.

Technical data

 AC 24 V supply (SELV/PELV)	Operating voltage / Frequency	AC 24 V \pm 20 % / 50/60 Hz
	Power consumption GBB13..2:	7 VA / 7 W
 AC 230 V supply	Operating voltage / Frequency	AC 230 V \pm 10 % / 50/60 Hz
	Power consumption GBB33..2:	5 VA / 5 W
Function data	Nominal linear force	550 N
	Maximum linear force	1100 N
	Maximum linear travel	75 mm
	Runtime for 75 mm linear travel	150 s (50 Hz) / 125 s (60 Hz)
Positioning signal Y for GBB16..:	Input voltage Y (wires 8-2)	DC 0...10 V
	Max. permissible input voltage	DC 35 V
Characteristic functions for GBB161.2 for GBB163.2	Input voltage Y (wires 8-2)	DC 0...35 V
	Non-adjustable characteristic function	DC 0...10 V
	Adjustable characteristic function	
	Offset U ₀	DC 0...5 V
Position indicator for GBB16...2	Span Δ U	DC 2...30 V
	Output voltage U (wires 9-2)	DC 0...10 V
	Max. output current	DC \pm 1 mA
 Auxiliary switches for GBB..4.2/.5.2/.6.2	Contact rating	6 A resistive, 2 A inductive
	Voltage (no mixed operation AC 24 V / AC 230 V)	AC 24...230 V
	Switching range for auxiliary switches	4...66.8 mm
	Setting increments	4 mm
Connection cables	Cross-section	0.75 mm ²
	Standard length	0.9 m
Degree of protection of housing	Degree of protection as per EN 60 529 (note mounting instructions)	IP 54
Protection class	Insulation class	EN 60 730
	AC 230 V, auxiliary switch	II
Environmental conditions	Operation / Transport	EN 60721-3-3 / EN 60721-3-2
	Temperature	-32...+55 °C / -32...+70 °C
	Humidity (non-condensing)	< 95% r. F. / < 95% r. F.
Norms and directives	Product safety: Automatic electrical 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)	A5W00004366 ¹⁾
	RCM Conformity	A5W00004367 ¹⁾
	Product environmental declaration ²⁾	CE1E4626en ¹⁾
	Dimensions	Actuator W x H x D (see "Dimensions")
Weight	Push rod (profile)	15 x 5 mm
	Without packaging	2 kg

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

²⁾ The product environmental declaration contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

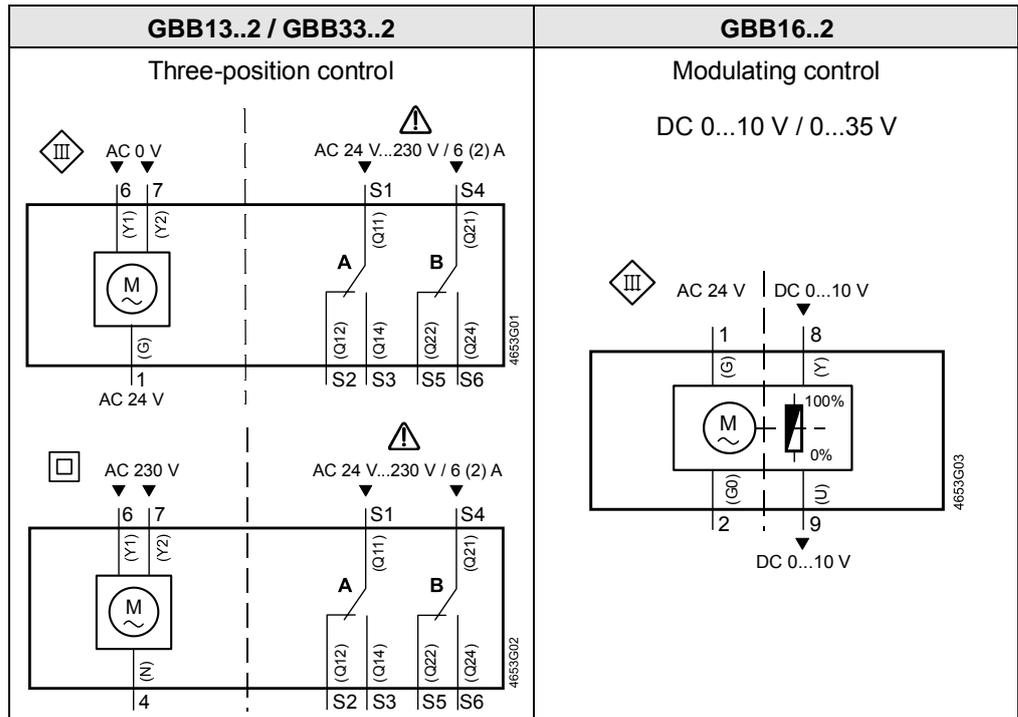
Disposal



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.

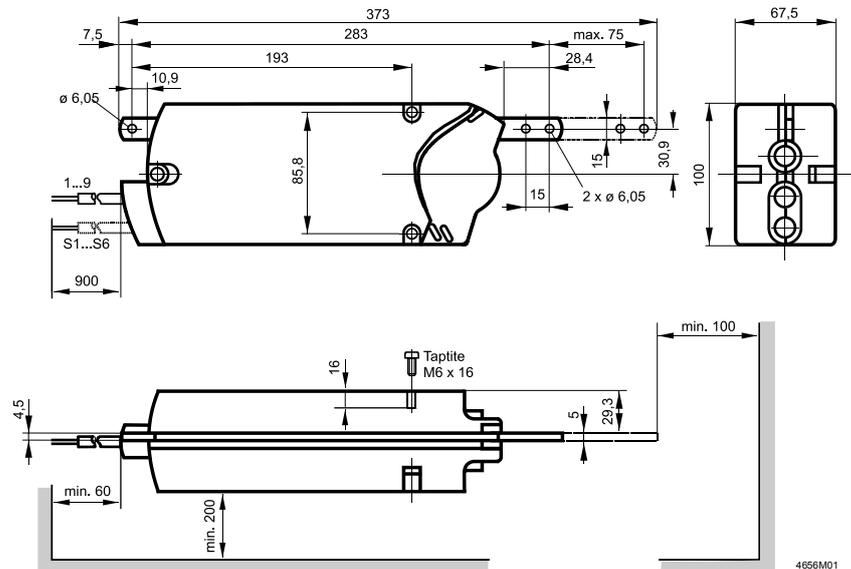
Internal diagrams



Cable labeling

Pin	Cable				Meaning
	Code	Number	Color	Abbreviation	
Actuators AC 24 V	G	1	red	RD	System potential AC 24 V
	G0	2	black	BK	System neutral
	Y1	6	purple	VT	Position signal AC 0 V, inward travel
	Y2	7	orange	OG	Position signal AC 0 V, outward travel
	Y	8	grey	GY	Position signal DC 0...10 V, 0...35 V
	U	9	pink	PK	Position indication DC 0...10 V
Actuators AC 230 V	N	4	blue	BU	Neutral conductor
	Y1	6	black	BK	Position signal AC 230 V, inward travel
	Y2	7	white	WH	Position signal AC 230 V, outward travel
Auxiliary switch	Q11	S1	grey/red	GY RD	Switch A Input
	Q12	S2	grey/blue	GY BU	Switch A Normally closed contact
	Q14	S3	grey/pink	GY PK	Switch A Normally open contact
	Q21	S4	black/red	BK RD	Switch B Input
	Q22	S5	black/blue	BK BU	Switch B Normally closed contact
	Q24	S6	black/pink	BK PK	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

© Siemens Switzerland Ltd, 2005
Technical specifications and availability subject to change without notice.