



OpenAir™

Air damper actuators

**GDB...2
GLB...2**

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

- AC 24 V / AC 230 V
- Nominal force 125 N (GDB) / 250 N (GLB)
- Travel 60 mm, mechanical adjustable
- Connection cable PVC, 0.9 m

Type-specific variations:

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

Remarks

This data sheet provides a brief overview of these actuators. Please refer to the Technical Basics in document Z4664en for a detailed description as well as information on safety, engineering notes, mounting and commissioning.

Use

- For damper areas up to 0.8 m^2 (GDB) / 1.5 m^2 (GLB), 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

| GDB.../GLB... | 131.2E | 136.2E | 331.2E | 336.2E ¹⁾ | 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 Uo, ΔU | | | | | | X |
| Position indicator U = DC 0...10 V | | | | | X | X |
| Self-adaptation of linear span | | | | | X | X |
| Auxiliary switches (two) | | X | | X | | |
| Linear direction switch | | | | | X | X |

¹⁾ While stocks last

Functions

| Type | GDB.3..2 / GLB.3..2 | GDB16..2 / GLB16..2 |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control type | Three-position control | Modulating control |
| Positioning signal with adjustable characteristic function | | DC 0...35 V at Offset Uo = 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. | ...the DIL switch setting outward / inward. |
| Position indication | | Position indicator: Output voltage U = DC 0...10 V is generated proportional to the linear travel. U depends of DIL switch setting. |
| Auxiliary switch | The switching points for auxiliary switches A and B can be set independent of each other in increments of 3.4 between 3.4 and 57.1 mm. | |
| Self-adaptation of linear span | | When self-adaptation is active, the actuator automatically determines the mechanical end positions of the linear span and maps the characteristic function (Uo, ΔU) to the calculated linear span. |
| Linear limitation | Stepless limitation between 0 and 60 mm for the linear travel is possible by means of a clamp from the linear/rotary set ASK55.2 | |

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 N4698 . |

Technical data

| | | | |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| | AC 24 V supply (SELV/PELV) | Operating voltage / Frequency Power consumption GDB13..2 / GLB13..2 GDB16..2 / GLB16..2 Push rod moves Holding | AC 24 V ± 20 % / 50/60 Hz 2 VA / 1 W 3 VA / 2 W 1 W |
| | AC 230 V supply | Operating voltage / Frequency Power consumption GDB33..2/GLB33..2 | AC 230 V ± 10 % / 50/60 Hz 2 VA / 1 W |
| Function data | Nominal linear force Maximum linear force Maximum linear travel Runtime for 60 mm linear travel | 125 N (GDB) / 250 N (GLB) 180 N (GDB) / 350 N (GLB) 60 mm 150 s (50 Hz) / 125 s (60 Hz) | |
| Positioning signal Y for GDB/GLI | Input voltage Y (wires 8-2) Max. permissible input voltage | DC 0...10 V, intern limited of DC 10 V DC 35 V | |
| Characteristic functions for GDB161.2 for GDB163.2 | Input voltage Y (wires 8-2) Non-adjustable characteristic function Adjustable characteristic function Offset U _o Span ΔU | DC 0...35 V DC 0...10 V DC 0...5 V DC 2...30 V | |
| Position indicator for GDB/GLB16..2 | Output voltage U (wires 9-2) Max. output current | DC 0...10 V or DC 10...0 V DC ± 1 mA | |
| | Auxiliary switches for GDB/GLB..6.2 | Contact rating Voltage (no mixed operation AC 24 V / AC 230 V) Switching range for auxiliary switches Setting increments | 6 A resistive, 2 A inductive AC 24...230 V 3.4...57.1 mm 3.4 mm |
| Connection cables | Cross-section Standard length | 0.75 mm ² 0.9 m | |
| Degree of protection of housing | Degree of protection as per EN 60 529 (note mounting instructions) | IP 40 | |
| Protection class | Insulation class AC 230 V, auxiliary switch | EN 60 730 II | |
| Environmental conditions | Operation / Transport Temperature Humidity (non-condensing) | EN 60721-3-3 / EN 60721-3-2 –32...+55 °C / –32...+70 °C < 95% r. F. / < 95% r. F. | |
| Norms and directives | Product safety: Automatic electrical controls for household and similar use Electromagnetic compatibility (Application) | EN 60 730-2-14 (Type 1) For residential, commercial and industrial environments | |
| | | GDB..2 | GLB..2 |
| | EU Conformity (CE) | A5W00003842 ¹⁾ | A5W00000176 ¹⁾ |
| | | GDB..2 | GLB..2 |
| | RCM Conformity | A5W00003843 ¹⁾ | A5W00000177 ¹⁾ |
| Dimensions | Product environmental declaration ²⁾ Actuator W x H x D (see "Dimensions") Push rod (profile) | CM2E4634E ¹⁾ 70.3 x 152 x 59 mm 10 x 4 mm | |
| Weight | Without packaging: GDB... / GLB... | 0.48 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).

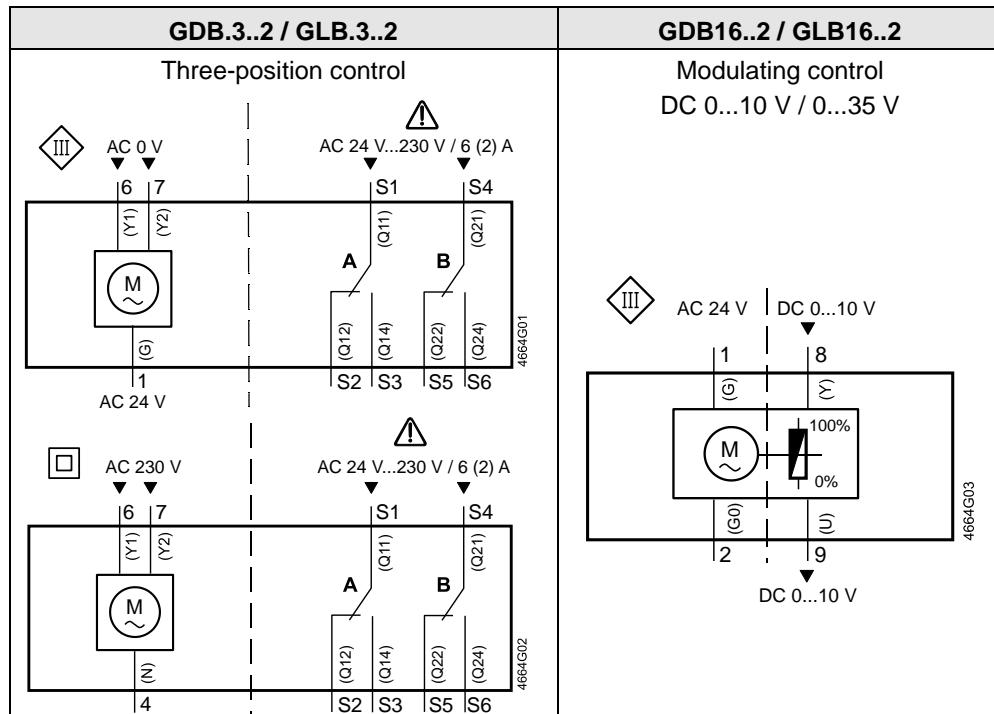
Disposal



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.

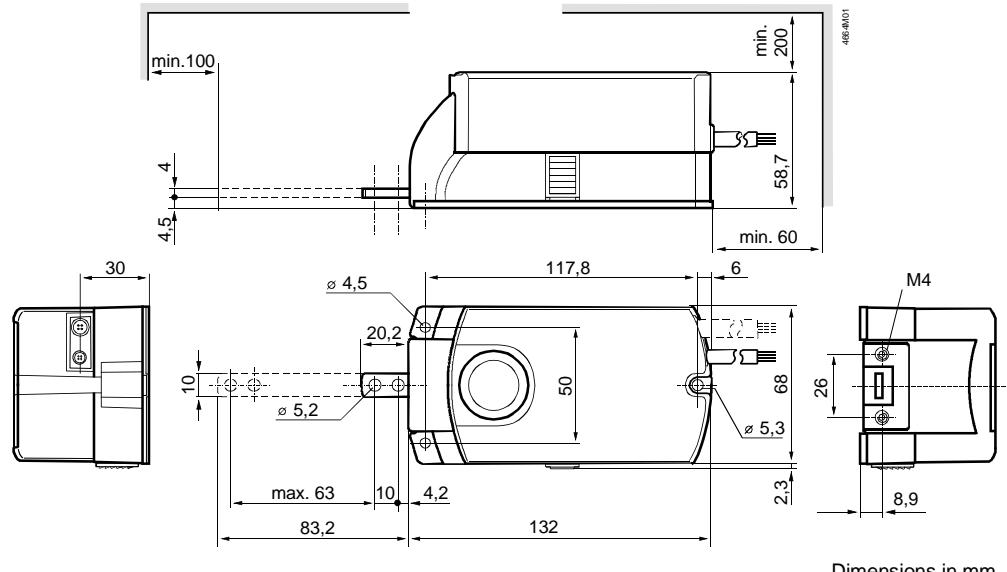
Internal diagrams



Cable labeling

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

Dimensions



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Technical specifications and availability subject to change without notice.