

High-torque actuator

GHT336.1A..



GHT336.1A/35



GHT336.1A/90
GHT336.1A/150



GHT336.1A/400
GHT336.1A/600

High-torque actuator for large area damper and combination damper

- Operating voltage AC 220 V
- On/off control and signal feedback
- Nominal angle of rotation 0...90°
- Manual operation with handwheel
- Position indicator
- Compatible with EN ISO 5211 flanges

Use

For ventilation system with large area damper or combination damper.

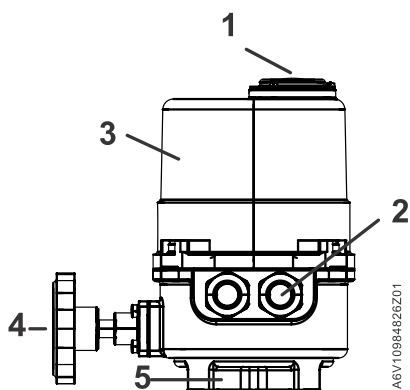
Mechanical design

The actuator is driven by an on/off control signal from an external controller, and generates a rotary motion which is transferred to the external link mechanism via mechanical transmissions, and drives the damper shaft for rotary movement from 0° to 90°.

The actuators have a reversible asynchronous motor and gear train.

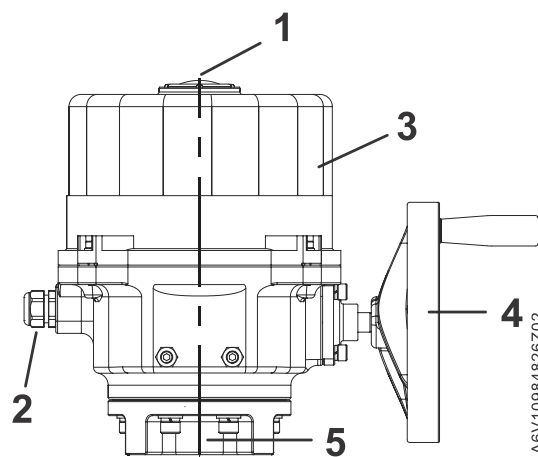
For GHT336.1A/35, the spring is fitted with a handwheel shaft, and the handwheel is engaged when pushed in. For others, the worm shaft is fitted with a direct-acting handwheel. Manual operation can be performed at any time using manual/electric auto changeover.

GHT336.1A/35



- 1. Position indicator
- 2. Terminal compartment
- 3. Cover

**GHT336.1A/90, GHT336.1A/150,
GHT336.1A/400, GHT336.1A/600**



- 4. Handwheel
- 5. EN ISO 5211 flange connection

Type summary

Product no.	Stock no.	Operating voltage	Control signal	Positioning time (50Hz, 90°)	Nominal torque [Nm]	Flange connection EN ISO 5211
GHT336.1A/35	S55499-D302	AC 220 V	On/Off	16	35	F07
GHT336.1A/90	S55499-D303	AC 220 V	On/Off	19	90	F07
GHT336.1A/150	S55499-D304	AC 220 V	On/Off	24	150	F07
GHT336.1A/400	S55499-D305	AC 220 V	On/Off	22	400	F10
GHT336.1A/600	S55499-D306	AC 220 V	On/Off	25	600	F12

Ordering

When ordering, please specify the quantity, product name and product number. Example:

Product no.	Stock no.	Description	Quantity
GHT336.1A/400	S55499-D305	High-torque actuator	1

Product documentation


Topic	Title	Document ID
Mounting, wiring	GHT336.1A.. Mounting instructions	A5W90001777
Data sheet	GHT336.1A.. Data sheet	A6V10984826
Standards and directives	EU Conformity (CE)	A5W90001939
	RCM conformity	A5W90001940
Environmental compatibility	Product environmental declaration	A5W90001904

Related documents such as environmental declarations, CE declarations, etc., can be downloaded at the following Internet address:

<http://siemens.com/bt/download>

Notes


Security

	⚠ CAUTION
	National safety regulations Failure to comply with national safety regulations may result in personal injury and property damage <ul style="list-style-type: none">• Observe national provisions and comply with the appropriate safety regulations.

Engineering

Electrical installation

The actuators must electrically connected in accordance with local regulations (see Wiring diagrams).

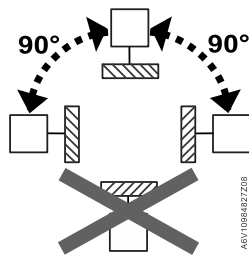
	⚠ WARNING
	Regulations and requirements to ensure the safety of people and property must be always observed!

Mounting

Mounting instructions

Product no.	Document ID
GHT336.1A..	A5W90001777

Mounting orientation



Installation

- Comply with operating ambient restrictions (see “Technical data [→ 6]”) .
- Do not twist the cable.
- Strong magnets may disturb or damage the actuator.
- A means of isolation from the power supply must be provided. For example, connecting a circuit breaker or fuse switch upstream of the actuator and controller.



⚠ WARNING

No internal line protection for supply lines to external consumers.

Risk of fire and injury due to short-circuits!

- Adapt the line diameters as per local regulations to the rated value of the installed over-current protection device.

Commissioning

1. Before commissioning, always check the wiring and test the functions.
2. Make sure the mechanical limit switches of the actuator is consistent with the damper's On/Off position.
3. When commissioning, adjust the damper shaft or linkage to make sure that, the actuator's auxiliary switch is triggered and positioning signal is sent out when the damper is in the On/Off position.
4. Factory setting of the position limit is 0...90°. Do not adjust the limit during commissioning to ensure normal operation.

Operation

Manual operation mode

GHT336.1A/35	Handwheel is engaged by pushing the handwheel in. Manual operation can be performed only when the power supply is switched off.
GHT336.1A/90 GHT336.1A/150 GHT336.1A/400 GHT336.1A/600	The handwheel is always engaged.

Reversing the direction of rotation

If the direction of rotation needs to be reversed, exchange the connections at terminals 3 and 4.

Maintenance

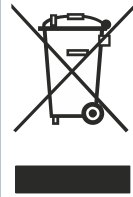
The actuator is designed for maintenance-free operation.



CAUTION

Before performing any service work on the actuator, switch off the valve and power supply. Disconnect electrical connections from terminals if necessary.

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.

Warranty

The actuator can only be used within the permissible range of Technical data. Otherwise, Siemens rejects any and all warranties.

Technical data

		GHT336.1A/35	GHT336.1A/90	GHT336.1A/150	GHT336.1A/400	GHT336.1A/600
Power supply	Operating voltage	AC 220 V				
	Frequency	50 / 60 Hz				
	Power consumption (operation)	42 VA / 10 W	100 VA / 40 W	110 VA / 40 W	203 VA / 120 W	220 VA / 120 W
	Power consumption (start)	140 VA / 10 W	340 VA / 40 W	380 VA / 40 W	710 VA / 120 W	700 VA / 120 W
Control and feedback	Control signal	On/Off control				
	Position feedback	Dry contact signal				
Operating data	Positioning time (50 Hz, 0...90°)	16 s	19 s	24 s	22 s	25 s
	Nominal angle of rotation	0...90°				
	Nominal torque Nm	35	90	150	400	600
	Max. torque Nm	50	110	200	550	800
	Auxiliary switch	AC 250 V, 10 A resistive	AC 250 V, 16 A resistive			
	Heating element (built-in)	≤ 3 W	≤ 7.5 W		≤ 8.5 W	
Degree of protection	Housing protection degree	IP67 as per EN 60539				
	Insulation class	Class I as per EN 60730				
Standards and directives	EU conformity (CE)	A5W90001939*				
	RCM conformity	A5W90001940*				
Environmental compatibility	The product environmental certification (A5W90001904*) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).					
Mounting	Flange connection	F07	F07	F07	F10	F12
Dimensions	Dimensions	see Dimensions				
Material	Housing, base	Die-cast aluminum alloy				
	Cover	Die-cast aluminum alloy				

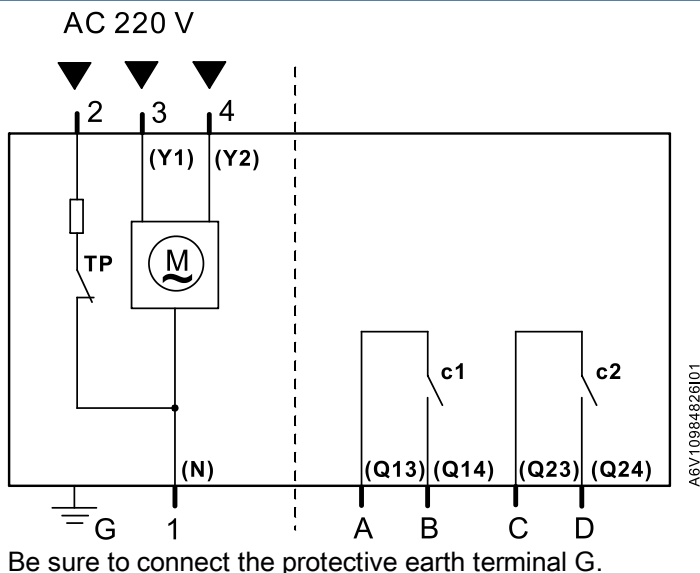
	GHT336.1A/35	GHT336.1A/90	GHT336.1A/150	GHT336.1A/400	GHT336.1A/600
Max. external supply line fusing	1 A	3 A	3 A	6 A	6 A

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

General ambient conditions

	Operation EN 60721-3-4	Transportation EN 6071-3-2	Storage EN 60721-3-1
Temperature	-25...70 °C	-25...70 °C	-5...45 °C
Humidity	< 95% r.h.	< 95% r.h.	< 95% r.h.

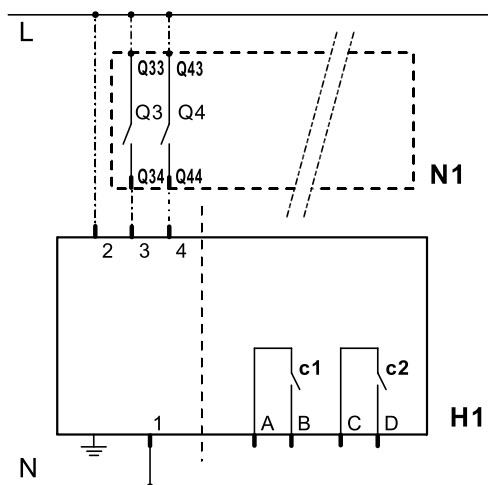
Internal diagrams



Be sure to connect the protective earth terminal G.

Pin	Terminal no.	Code	Meaning
Actuator AC 220 V	G	-	Protective earth
	1	N	Neutral
	3	Y1	Control signal AC 220 V, clockwise
	4	Y2	Control signal AC 220 V, counter-clockwise
	5	-	-
	6	-	-
Auxiliary signal feedback	A	Q13	Auxiliary switch c1
	B	Q14	Auxiliary switch c1, normally open
	C	Q23	Auxiliary switch c2
	D	Q24	Auxiliary switch c2, normally open
Built-in heater	2	-	-

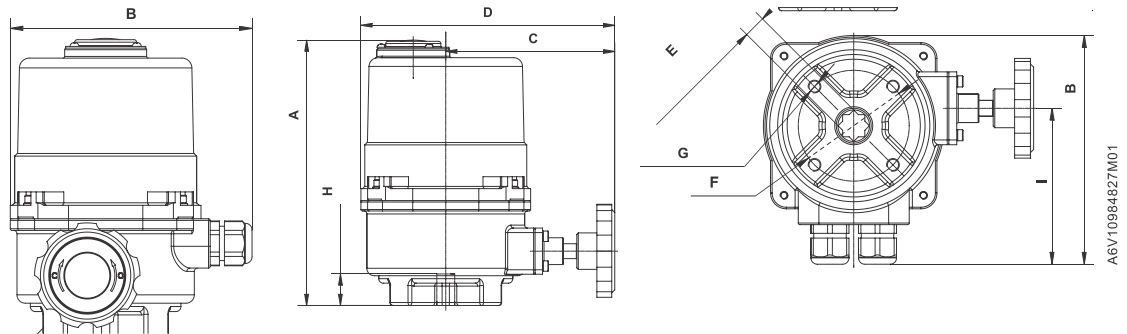
Wiring diagrams



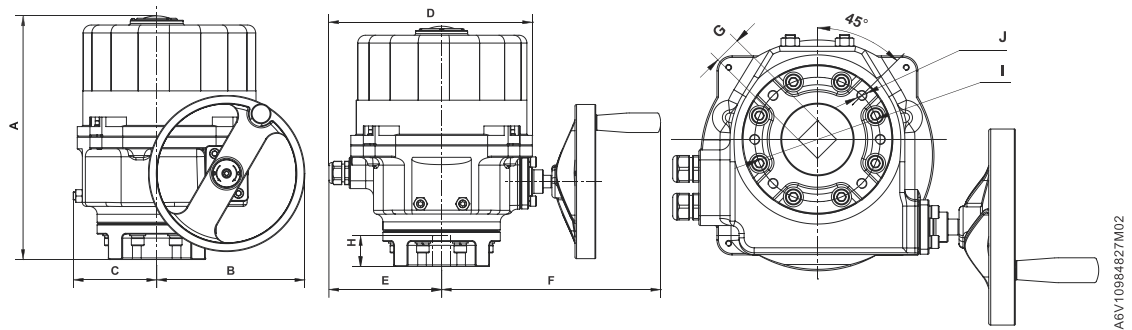
- N1 Controller
 - H1 Actuator
 - L AC 220 V
 - N Neutral
 - Q3, Q4* Controller contact
 - 3 (Y1) Control signal (open)
 - 4 (Y2) Control signal (closed)
 - c1 Auxiliary switch, closed position
 - c2 Auxiliary switch, open position
- * If Q3 and Q4 are closed at the same time, the actuator will not working properly.

Dimensions

Dimensions in mm



Product no.	A	B	C	D	E	F	G	H	Weight [kg]	EN ISO 5211
GHT336.1A/35	179	145	114	171	11×11	70	4-M8	20	3.6	F07



Product no.	A	B	C	D	E	F	G	H	I	J	Weight [kg]	EN ISO 5211
GHT336.1A/90	250	125	77	216	125	242	14×14	35	70	4-M8	11	F07
GHT336.1A/150	250	125	77	216	125	242	17×17	35	70	4-M8	11	F07
GHT336.1A/400	308	187	105	262	150	280	22×22	55	102	4-M10	22	F10
GHT336.1A/600	308	187	105	262	150	280	27×27	55	125	4-M12	22	F12

Revision numbers

Type	Valid from rev. no.	Type	Valid from rev. no.
GHT336.1A/35	..A	GHT336.1A/400	..A
GHT336.1A/90	..A	GHT336.1A/600	..A
GHT336.1A/150	..A		

Issued by
Beijing Siemens Cerberus Electronics Ltd.
Building Technologies Division
No.1, Fengzhi East Road, Xibeiwang
Haidian District, 100094 BEIJING, China
Tel. +86 10 64768806
www.siemens.com/buildingtechnologies

© Beijing Siemens Cerberus Electronics Ltd., 2017
Technical specifications and availability subject to change without notice.