



## Rotary actuators for ball valves

### GSD..41.9A

for ball valves VA..60.. / VB..60..,

AC 24 V / DC 24 V / AC 230 V

- 
- Electromotoric rotary actuators without spring return
  - For On-Off control (2 wire SPDT)
  - Pre-wired with 0.9 m long connection cable

#### Use

- 
- For open/close ball valves 2-port and changeover ball valves 3-port, internally or externally threaded connections DN15 to DN25.
  - Suitable for use with 2-position controllers.

#### Referenced Documents

---

Data sheet N4603en, GSD..1

## Type summary

Type	GSD141.9A	GSD341.9A
Operating voltage	AC 24 V / DC 24 V	AC 230 V
Control	On-Off *	

\* 2 wires SPDT (Single Pole Double Throw)  
Refer to "Geräteschaltpläne", page 5.

## Functions

Control	On-Off *
Rotary direction	Clockwise or counter-clockwise, depending on the mounting position of the rotary actuator on the ball valve
Gear train disengagement slider	The rotary actuator can be manually adjusted by pressing the gear train disengagement slider

\* 2 wires SPDT (Single Pole Double Throw)

## Equipment combinations

The rotary actuators are suitable for operating the following Siemens open/close ball valves (2-port) and changeover ball valves (3-port):

Ball valves with:				$k_{vs}$ [m <sup>3</sup> /h]	DN	GSD..41.9E	
internal threads *Rp	external threads **	G..B	$\Delta p_{max}$			$\Delta p_s$	
–	–	<b>VAG60.15-9</b>	G 1 B	9	15	350	1400
<b>VAI60.15-15</b>	Rp ½"	–	–	15	15		
–	–	<b>VAG60.20-17</b>	G 1 ¼ B	17	20		
<b>VAI60.20-22</b>	Rp 1"	–	–	22	20		
<b>VAI60.25-22</b>	Rp 1"	<b>VAG60.25-22</b>	G 1 ½ B	22	25		
<b>VBI60.15-5L</b>	Rp ½"	–	–	5	15	350	–
<b>VBI60.20-9L</b>	Rp 1"	–	–	9	20		
<b>VBI60.25-9L</b>	Rp 1"	–	–	9	25		
–	–	<b>VBG60.15-8T</b>	G 1 B	8	15	350	–
<b>VBI60.15-12T</b>	Rp ½"	–	–	12	15		
–	–	<b>VBG60.20-13T</b>	G 1 ¼ B	13	20		
<b>VBI60.20-16T</b>	Rp 1"	–	–	16	20		
–	–	<b>VBG60.25-13T</b>	G 1 ½ B	13	25		
<b>VBI60.25-16T</b>	Rp 1"	–	–	16	25		

\* Data sheet N4213

\*\* Data sheet N4214

## Notes

### Mounting

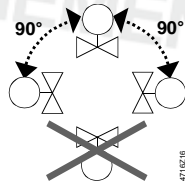
Additional information on rotary actuators is available in document N4603.

Both ball valve and rotary actuator can easily be assembled at the mounting location. Neither special tools nor adjustments are required.

The rotary actuator is supplied with Mounting Instructions:

Type	Document	Stock no.
<b>GSD..41.9A</b>	M4655	74 319 0884 0
<b>VAI60.. / VBI60..</b>	M4213	74 319 0883 0
<b>VAG60.. / VBG60..</b>	M4214	74 319 0923 0

Orientation



Cables must be easily accessible.

### Commissioning

Manual adjustment

When commissioning the system, check both wiring and rotary actuator functions. The rotary actuator can be manually adjusted into any position between 0° and 90° by pushing the gear train disengagement slider.

If a control signal from the controller is present, this will take priority in determining the position after the slider is released.



For manual adjustment: Power off!

Electric, parallel connection of actuators

Up to 10 actuators of the same type can be electrically wired in parallel; cable length and cable cross-sections must be observed.

### Disposal



The device is considered electrical and electronic equipment for disposal in terms of the applicable European Directive 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.

## Technical data

⚠ Supply voltage AC 24 V / DC 24 V (SELV / PELV)	Operating voltage	AC 24 V ± 20 %; 50 / 60 Hz DC 24 V ± 15 %
--	-------------------	--

Power consumption	
Actuator running	2 VA / 1.5 W
Holding	1 VA / 0.5 W

⚠ Supply voltage AC 230 V	Operating voltage	AC 230 V ± 15 %
	Frequency	50 / 60 Hz
	Fuse for power cable (fast)	2 A
	Power consumption	
	Actuator running	12 VA / 2 W
Holding	12 VA / 2 W	

Functional data	Nominal torque	2 Nm
	Nominal rotary angle / max. rotary angle	90° / 95 ± 2°
	Runtime for 90° rotary angle (motor operation)	30 s

Connection cable	Cross-section	0.75 mm <sup>2</sup>
	Standard length	0.9 m

Degree of protection	As per EN 60529 (see M4655)	IP40
----------------------	-----------------------------	------

Protection class	Insulation class	EN 60730
	AC 24 V / DC 24 V	III
	AC 230 V	II

Environmental conditions	Operation / Transport	IEC 60721-3-3 / IEC 60721-3-2
	Climatic Conditions	Class 3K5 / Class 2K3
	Temperature	-32...+55 °C / -32...+70 °C
	Humidity (non-condensing)	< 95 % r.h. / < 95 % r.h.

Standards and directives	Product standards	
	Automatic electrical controls for household and similar use	EN 60730-2-14 (Mode of operation, Type 1)

Electromagnetic compatibility (Application)	For residential, commercial and industrial environments
---	---

EU Conformity (CE)	A5W00004362 <sup>1)</sup>
--------------------	---------------------------

RCM Conformity	A5W00004363 <sup>1)</sup>
----------------	---------------------------

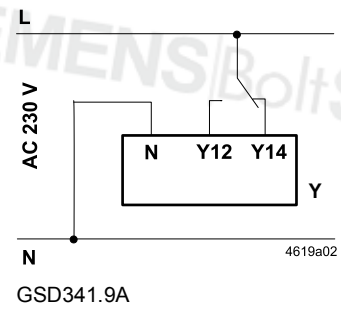
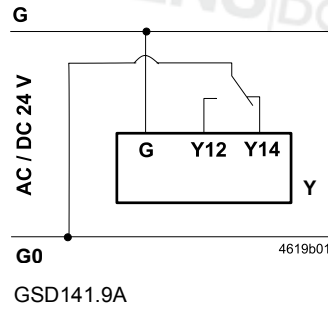
Product environmental declaration <sup>2)</sup>	CM2E4604E <sup>1)</sup>
---	-------------------------

Weight	Without packaging:	
	GSD141.9A	0.63 kg
	GSD341.9A	0.64 kg

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

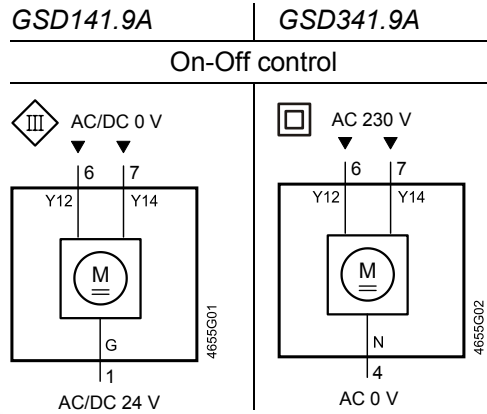
<sup>2)</sup> The product environmental declaration contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

## Internal Diagrams



## Internal diagrams

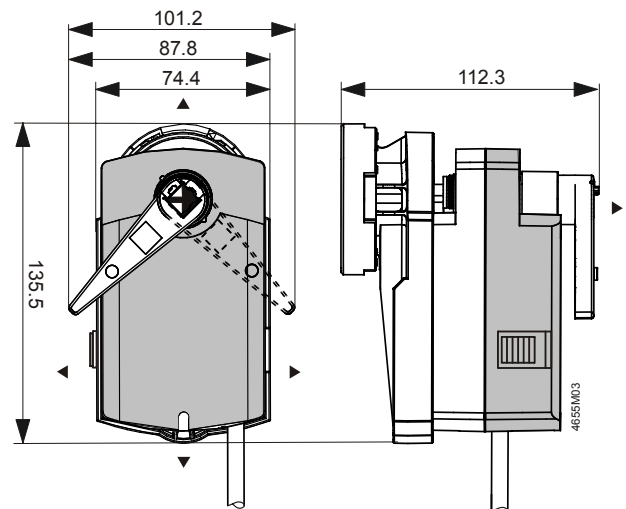
GSD..41.9A



Cable designations

Connection	Cable				Meaning
	Code	No.	Color	Abbr.	
Rotary actuators AC/DC 24 V	G	1	red	RD	System potential AC 24 V / DC 24 V
	Y12	6	purple	VT	Positioning signal AC/DC 0 V "Clockwise"
	Y14	7	orange	OG	Positioning signal AC/DC 0 V "Counter-clockwise"
Rotary actuators AC 230 V	N	4	blue	BU	Neutral
	Y12	6	black	BK	Positioning signal AC 230 V "Clockwise"
	Y14	7	white	WH	Positioning signal AC 230 V "Counter-clockwise"

## Dimensions



- = >100 mm    Min. clearance from ceiling or wall for mounting, connection, operation, maintenance, etc.  
 = >200 mm

SIEMENS/Bolt SIEMENS/Bolt SIEMENS/Bolt SIEMENS/Bolt SIEMENS

SIEMENS/Bolt SIEMENS/Bolt SIEMENS/Bolt SIEMENS/Bolt SIEMENS

Issued by  
Siemens Switzerland Ltd  
Building Technologies Division  
International Headquarters  
Gubelstrasse 22  
6301 Zug  
Switzerland  
Tel. +41 58-724 24 24  
[www.siemens.com/buildingtechnologies](http://www.siemens.com/buildingtechnologies)

© Siemens Switzerland Ltd, 2012

Technical specifications and availability subject to change without notice.

SIEMENS/Bolt SIEMENS/Bolt SIEMENS/Bolt SIEMENS/Bolt SIEMENS