

**SWISS<sup>+</sup>**  
TECHNOLOGY

# **NABA SERIES BALL VALVE ACTUATOR**

**2 Point & 3 Point Control  
2 Nm**

**NENUTE<sup>®</sup>EC**

INNOVATIVE MEMBER OF SWIS<sup>+</sup>TEC

# NABA SERIES BALL VALVE ACTUATOR

2 Point & 3 Point Control  
2 Nm



## NABA...02 (S1) SERIES

NABA series standard valve actuators are especially designed and produced for applications in the HVAC systems. Our wide range of standard valve actuators has been developed to operate and position ball valves of different sizes.

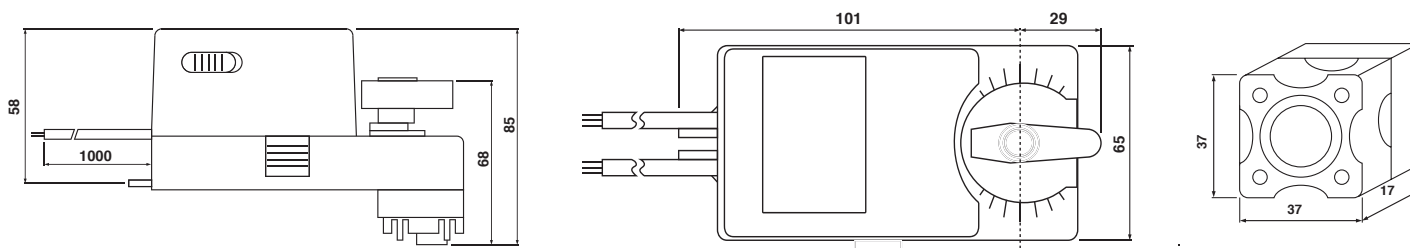
### PRODUCT FEATURE

- Torque 2 Nm
- Valve size DN15(1/2") / DN20(3/4")
- Power supply AC/DC 24 V and AC 230 V
- Shaft dimensions - □ 9.0 mm (fixed)
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Adjustable SPDT auxiliary switch

### MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NABA 1-02 LN	2 Nm	AC/DC 24 V ± 10%	60...90 sec	-
NABA 1-02S1 LN	2 Nm	AC/DC 24 V ± 10%	60...90 sec	1 x SPDT (Adjustable)
NABA 2-02 LN	2 Nm	AC 230 V ± 10%	60...90 sec	-
NABA 2-02S1 LN	2 Nm	AC 230 V ± 10%	60...90 sec	1 x SPDT (Adjustable)

## DIMENSION (mm)



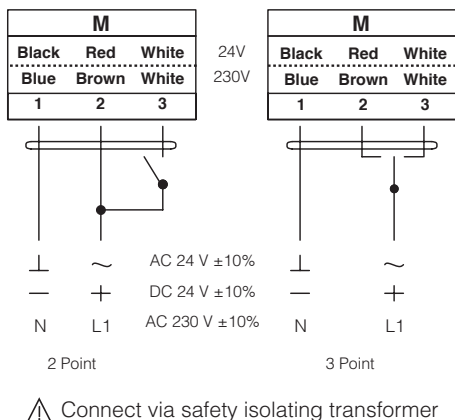
## TECHNICAL SPECIFICATION

MODEL NUMBER	NABA 1-02 (S1)	NABA 2-02 (S1)
TORQUE	2 Nm	2 Nm
VALVE SIZE	DN15(1/2") / DN20(3/4")	DN15(1/2") / DN20(3/4")
SHAFT DIMENSION	□ 9.0 mm (fixed)	□ 9.0 mm (fixed)
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 & 3 point control	2 & 3 point control
POWER CONSUMPTION		
● OPERATING	4.0 W	4.0 W
● END POSITION	2.0 W	2.0 W
FOR WIRE SIZING	14.0 VA	14.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	< 0.8 Kg	< 0.8 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

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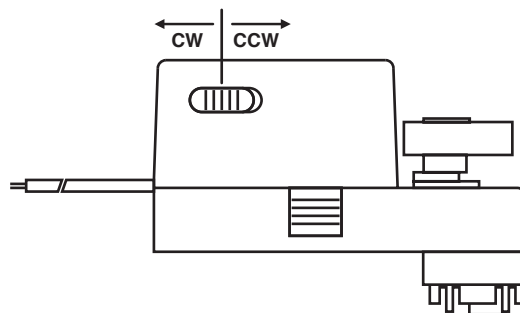
## WIRING DIAGRAM NABA...02 (S1) POWER SUPPLY AC/DC 24V / AC 230V



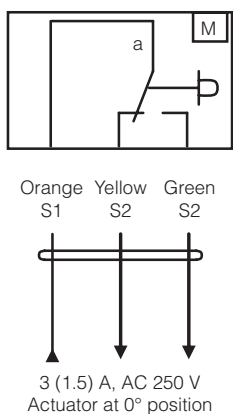
## DIRECTION OF ROTATION NABA...02 (S1)

Default factory setting: CCW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



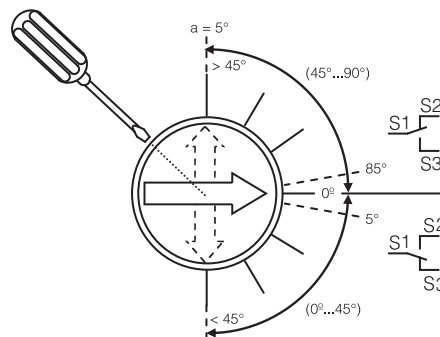
## WIRING DIAGRAM NABA...02 (S1) AUXILIARY SWITCH



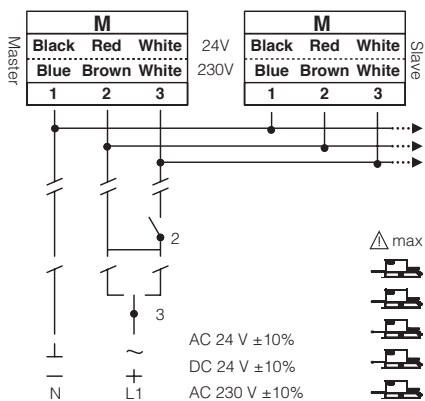
## AUXILIARY SWITCH NABA...02 (S1)

Switch **a** factory-set at 5°.

The auxiliary switch can be optimally adjusted between 0°...90°.

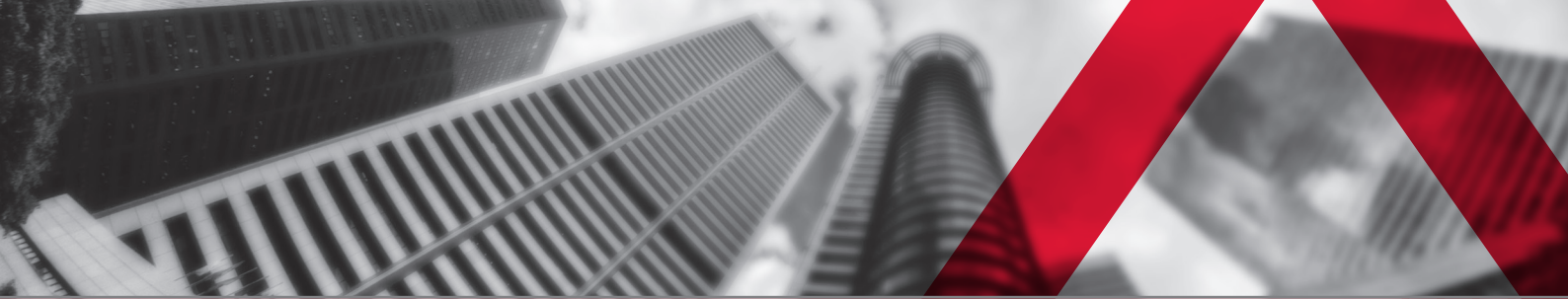


## WIRING DIAGRAM NABA...02 (S1) PARALLEL CONNECTION



## REMARK

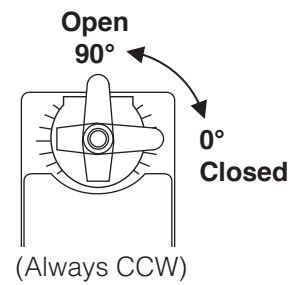
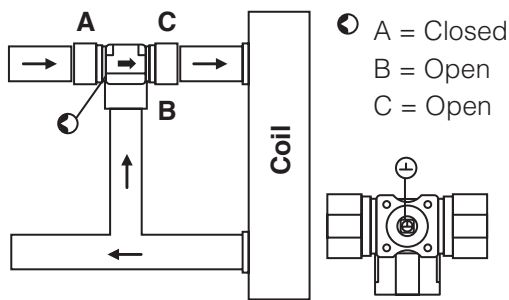
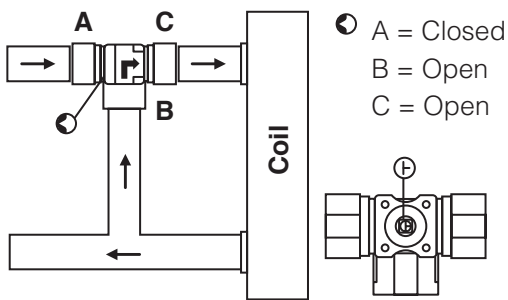
Parallel connection of NABA...02 (S1) actuators are limited to 5. Power consumption must be observe.



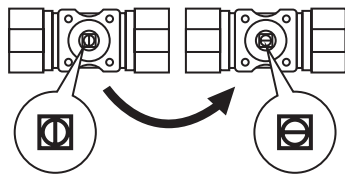
### MIXING CLOSED

### MIXING OPEN

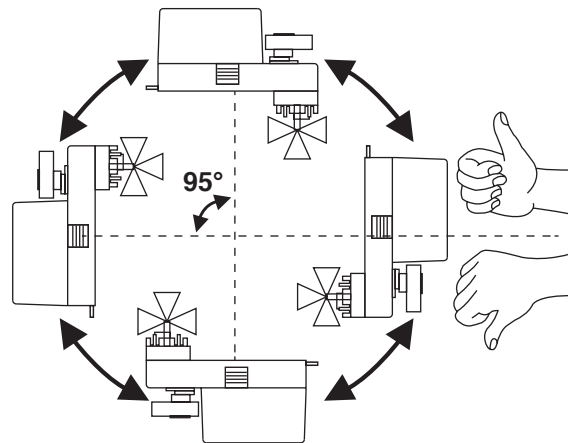
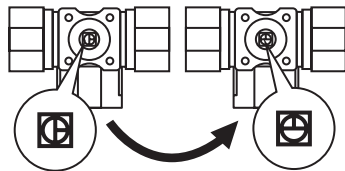
### ACTUATOR POSITION



#### 2-way Closed 2-way Open



#### 3-way Closed 3-way Open



### IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.

This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

AC / DC 24 V: Connect via safety isolating transformer.  
 AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its products.

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# **NABM SERIES BALL VALVE ACTUATOR**

**Modulating Control  
2 Nm**

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INNOVATIVE MEMBER OF SWIS<sup>+</sup>TEC

# NABM SERIES BALL VALVE ACTUATOR

Modulating Control  
2 Nm



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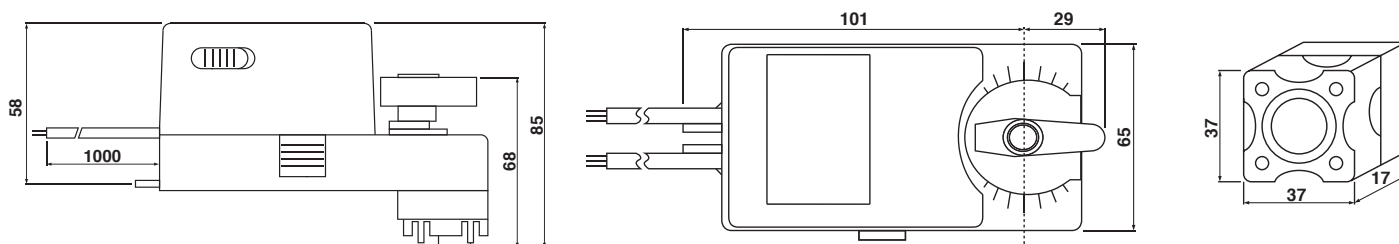
## PRODUCT FEATURE

- Torque 2 Nm
- Valve size DN15(1/2") / DN20(3/4")
- Power supply AC/DC 24 V
- Modulating Control Signal DC 0(2)...10 V
- Shaft dimensions - □ 9.0 mm (fixed)
- Actuator with 1 m cable connection
- Selectable direction of rotation of reversing actuator

## MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NABM 1.2-02 LN	2 Nm	AC/DC 24 V ± 10%	60...90 sec	-

## DIMENSION (mm)



## TECHNICAL SPECIFICATION

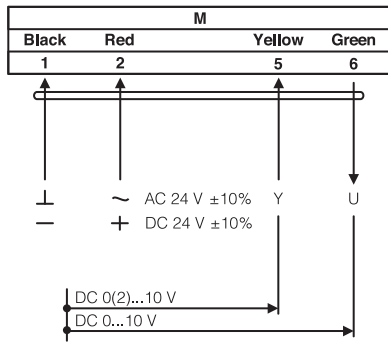
<b>MODEL NUMBER</b>	<b>NABM 1.2-02</b>
<b>TORQUE</b>	2 Nm
<b>VALVE SIZE</b>	DN15(½") / DN20(¾")
<b>SHAFT DIMENSION</b>	□ 9.0 mm (fixed)
<b>POWER SUPPLY</b>	AC/DC 24 V ± 10%
<b>FREQUENCY</b>	50...60 Hz
<b>CONTROL SIGNAL</b>	DC 0(2)...10 V
<b>POSITION SIGNAL (OUTPUT)</b>	DC 0...10 V
<b>POWER CONSUMPTION</b>	
● OPERATING	4.0 W
● END POSITION	2.0 W
<b>FOR WIRE SIZING</b>	14.0 VA
<b>ELECTRICAL CONNECTION</b>	1 m Cable
<b>AUXILIARY SWITCH RATING</b>	3 (1.5) A, AC 250 V
<b>PROTECTION CLASS</b>	Class III ⚡
<b>ANGLE OF ROTATION</b>	90° (95° mechanical)
<b>WEIGHT</b>	< 0.8 Kg
<b>LIFE CYCLE</b>	60,000 Rotation
<b>SOUND LEVEL</b>	40 dB
<b>IP PROTECTION</b>	IP54
<b>OPERATING TEMPERATURE</b>	-20°...50° as per IEC 721-3-3
<b>NON-OPERATING TEMPERATURE</b>	-30°...+60° C / IEC 721-3-2
<b>AMBIENT HUMIDITY</b>	5%...95% rH non condensing / EN
<b>MAINTENANCE</b>	Maintenance Free
<b>MODE OF OPERATION</b>	Type I / EN 60730-1
<b>EMC</b>	CE & ISO 9000 EN / EEC



# NABM SERIES BALL VALVE ACTUATOR

Modulating Control  
2 Nm

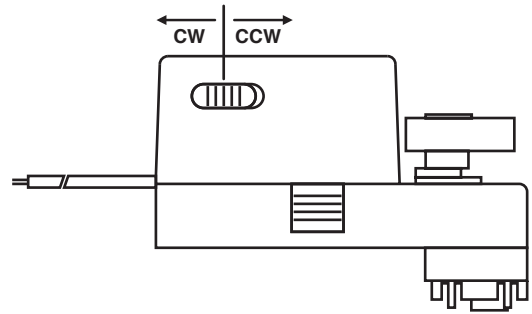
## WIRING DIAGRAM NABM...02 POWER SUPPLY AC/DC 24V



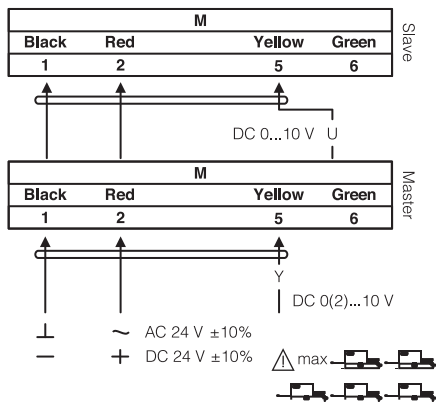
## DIRECTION OF ROTATION NABM...02

Default factory setting: CCW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.

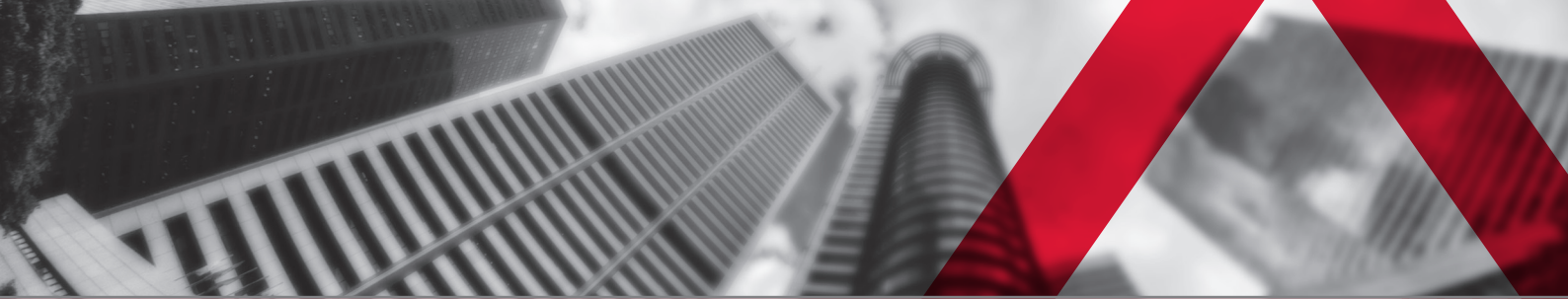


## WIRING DIAGRAM NABM...02 PARALLEL CONNECTION



## REMARK

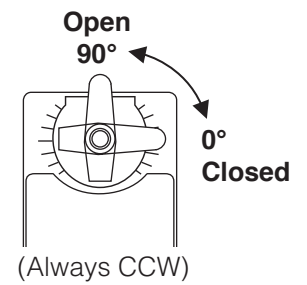
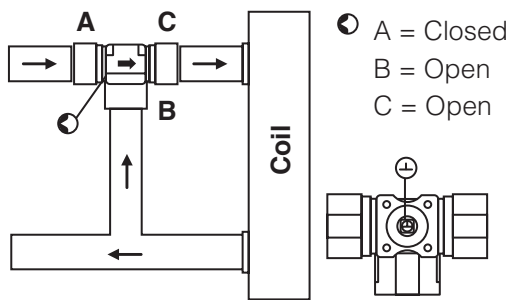
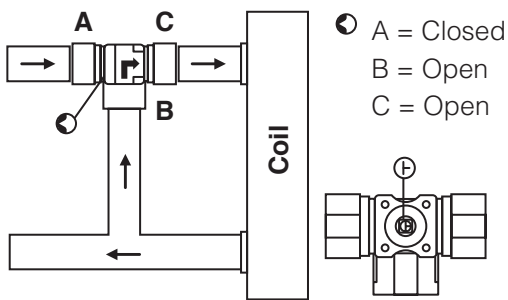
During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator.



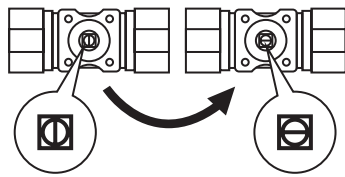
### MIXING CLOSED

### MIXING OPEN

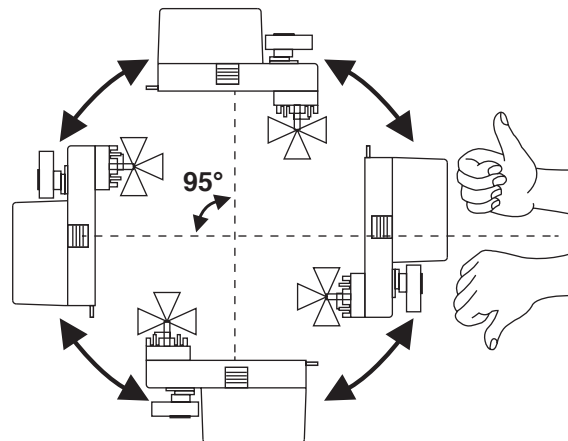
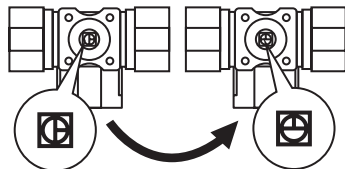
### ACTUATOR POSITION



#### 2-way Closed 2-way Open



#### 3-way Closed 3-way Open



### IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.

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AC / DC 24 V: Connect via safety isolating transformer.  
 AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

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**5 Nm**

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# NABA SERIES BALL VALVE ACTUATOR

2 Point & 3 Point Control  
5 Nm



**High Neck  
Ball Valve Actuator**



**Low Neck  
Ball Valve Actuator**

## NABA...05 (S1) SERIES

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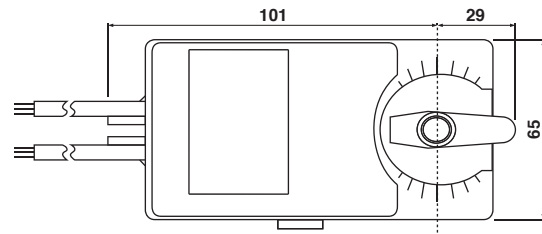
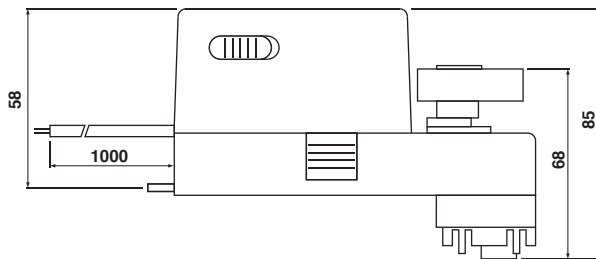
### PRODUCT FEATURE

- Torque 5 Nm
- Valve size DN15(1/2") / DN20(3/4") / DN25(1") / DN32(1 1/4")
- Power supply AC/DC 24 V and AC 230 V
- Shaft dimensions - □ 9.0 mm (fixed)
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Adjustable SPDT auxiliary switch
- Available in high neck and low neck

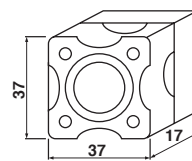
### MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NABA 1-05 LN	5 Nm	AC/DC 24 V ± 10%	70...100 sec	-
NABA 1-05 HN	5 Nm	AC/DC 24 V ± 10%	70...100 sec	-
NABA 1-05S1 LN	5 Nm	AC/DC 24 V ± 10%	70...100 sec	1 x SPDT (Adjustable)
NABA 1-05S1 HN	5 Nm	AC/DC 24 V ± 10%	70...100 sec	1 x SPDT (Adjustable)
NABA 2-05 LN	5 Nm	AC 230 V ± 10%	70...100 sec	-
NABA 2-05 HN	5 Nm	AC 230 V ± 10%	70...100 sec	-
NABA 2-05S1 LN	5 Nm	AC 230 V ± 10%	70...100 sec	1 x SPDT (Adjustable)
NABA 2-05S1 HN	5 Nm	AC 230 V ± 10%	70...100 sec	1 x SPDT (Adjustable)

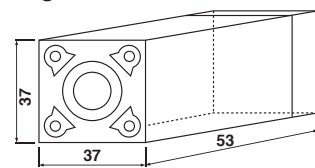
## DIMENSION (mm)



For Low Neck:



For High Neck:



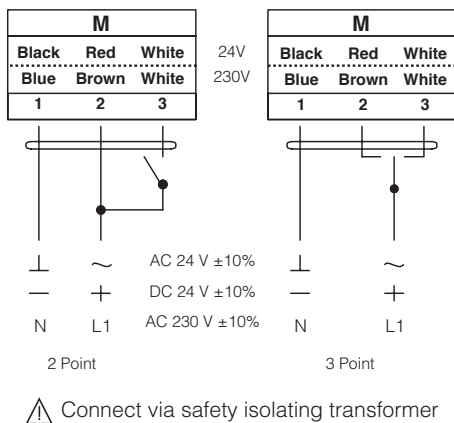
## TECHNICAL SPECIFICATION

MODEL NUMBER	NABA 1-05 (S1)	NABA 2-05 (S1)
TORQUE	5 Nm	5 Nm
VALVE SIZE	DN15(1/2") / DN20(3/4") / DN25(1") / DN32(1 1/4")	DN15(1/2") / DN20(3/4") / DN25(1") / DN32(1 1/4")
SHAFT DIMENSION	□ 9.0 mm (fixed)	□ 9.0 mm (fixed)
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 & 3 point control	2 & 3 point control
POWER CONSUMPTION		
● OPERATING	4.0 W	4.0 W
● END POSITION	2.0 W	2.0 W
FOR WIRE SIZING	14.0 VA	14.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	< 0.8 Kg	< 0.8 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

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5 Nm

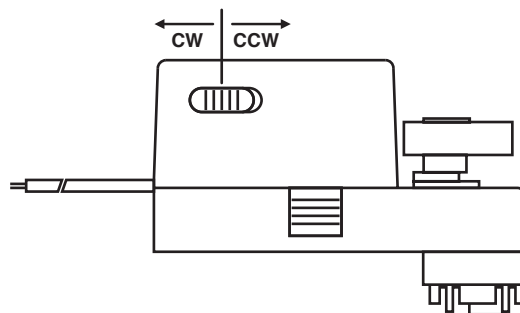
## WIRING DIAGRAM NABA...05 (S1) POWER SUPPLY AC/DC 24V / AC 230V



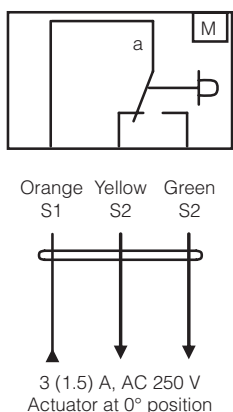
## DIRECTION OF ROTATION NABA...05 (S1)

Default factory setting: CCW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



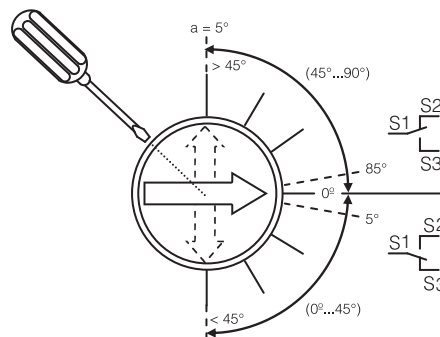
## WIRING DIAGRAM NABA...05 (S1) AUXILIARY SWITCH



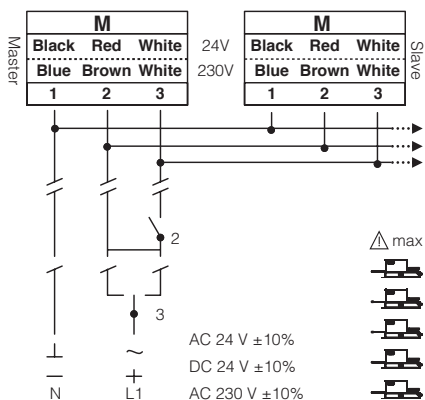
## AUXILIARY SWITCH NABA...05 (S1)

Switch **a** factory-set at 5°.

The auxiliary switch can be optimally adjusted between 0°...90°.

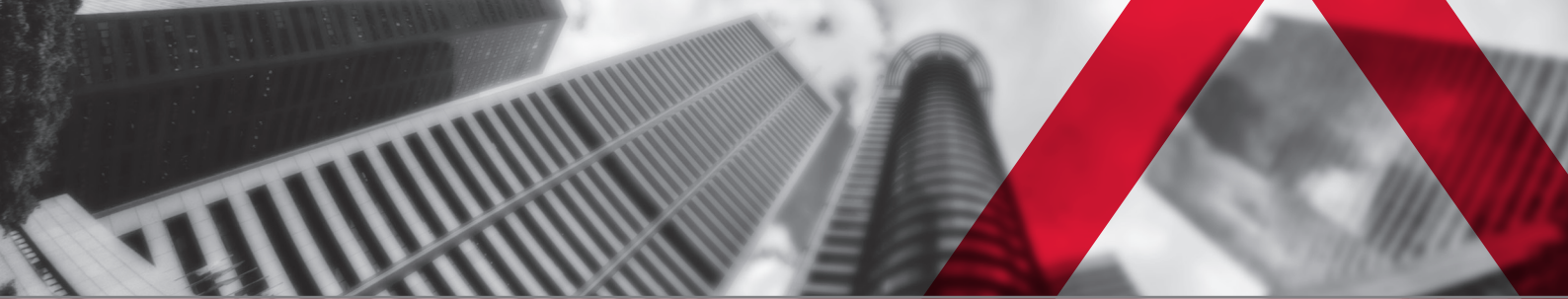


## WIRING DIAGRAM NABA...05 (S1) PARALLEL CONNECTION



## REMARK

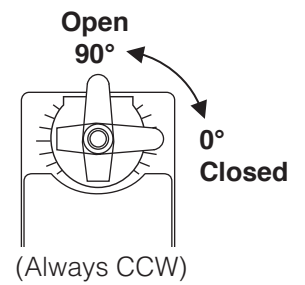
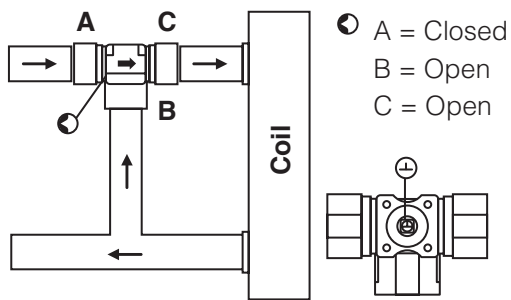
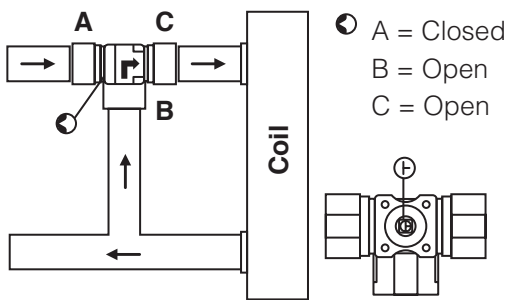
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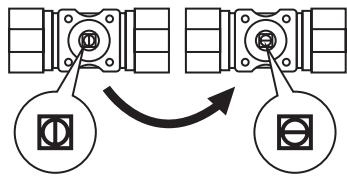
### MIXING CLOSED

### MIXING OPEN

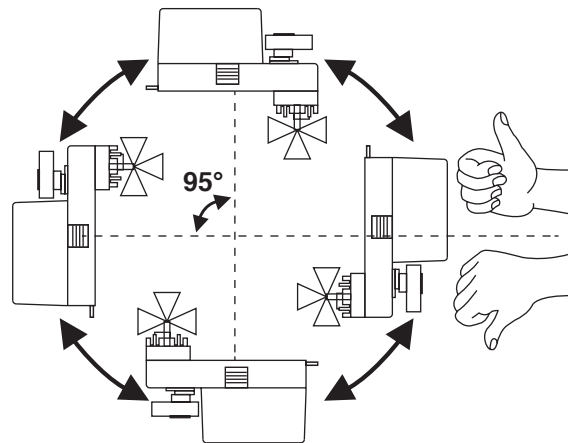
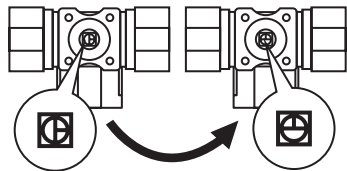
### ACTUATOR POSITION



### 2-way Closed 2-way Open



### 3-way Closed 3-way Open



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- Valve size DN15(1/2") / DN20(3/4") / DN25(1") / DN32(1 1/4")
- Power supply AC/DC 24 V and AC 230 V
- Control Modulating DC 0(2)...10 V
- Shaft dimensions - □ 9.0 mm (fixed)
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Available in high neck and low neck



High Neck  
Ball Valve Actuator

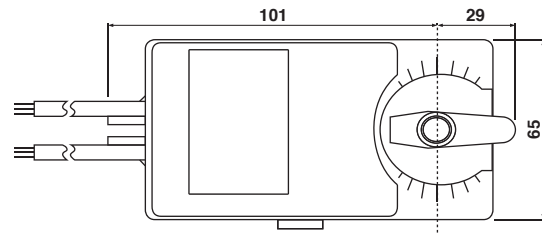
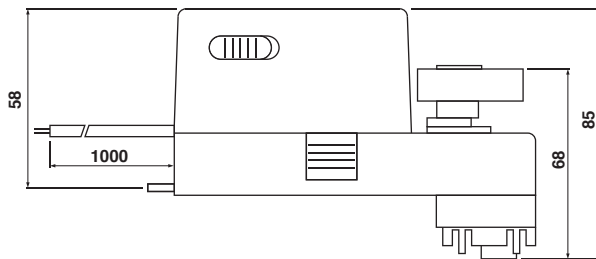


Low Neck  
Ball Valve Actuator

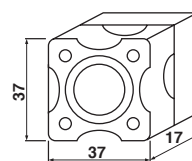
## MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NABM 1.2-05 LN	5 Nm	AC/DC 24 V ± 10%	70...100 sec	-
NABM 1.2-05 HN	5 Nm	AC/DC 24 V ± 10%	70...100 sec	-

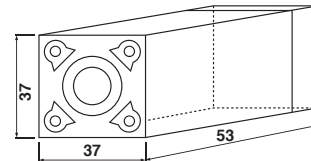
## DIMENSION (mm)



For Low Neck:



For High Neck:



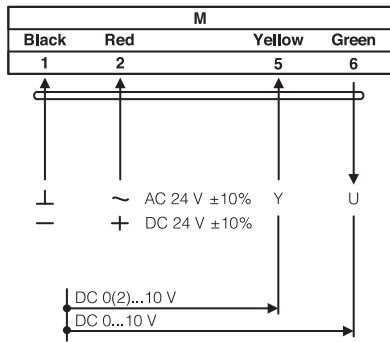
## TECHNICAL SPECIFICATION

<b>MODEL NUMBER</b>	<b>NABM 1.2-05</b>
<b>TORQUE</b>	5 Nm
<b>VALVE SIZE</b>	DN15(1/2") / DN20(3/4") / DN25(1") / DN32(1 1/4")
<b>SHAFT DIMENSION</b>	□ 9.0 mm (fixed)
<b>POWER SUPPLY</b>	AC/DC 24 V ± 10%
<b>FREQUENCY</b>	50...60 Hz
<b>CONTROL SIGNAL (INPUT)</b>	DC 0(2)...10 V
<b>CONTROL SIGNAL (OUTPUT)</b>	DC 0...10 V
<b>POWER CONSUMPTION</b>	
● OPERATING	4.0 W
● END POSITION	2.0 W
<b>FOR WIRE SIZING</b>	14.0 VA
<b>ELECTRICAL CONNECTION</b>	1 m Cable
<b>PROTECTION CLASS</b>	Class III ⚡
<b>ANGLE OF ROTATION</b>	90° (95° mechanical)
<b>WEIGHT</b>	< 0.8 Kg
<b>LIFE CYCLE</b>	60,000 Rotation
<b>SOUND LEVEL</b>	40 dB
<b>IP PROTECTION</b>	IP54
<b>OPERATING TEMPERATURE</b>	-20°...50° as per IEC 721-3-3
<b>NON-OPERATING TEMPERATURE</b>	-30°...+60° C / IEC 721-3-2
<b>AMBIENT HUMIDITY</b>	5%...95% rH non condensing / EN
<b>MAINTENANCE</b>	Maintenance Free
<b>MODE OF OPERATION</b>	Type I / EN 60730-1
<b>EMC</b>	CE & ISO 9000 EN / EEC

# NABM SERIES BALL VALVE ACTUATOR

Modulating Control  
5 Nm

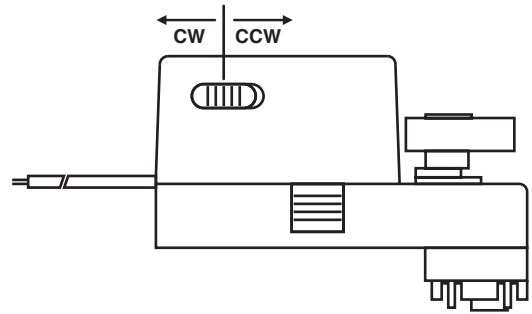
## WIRING DIAGRAM NABM...05 POWER SUPPLY AC/DC 24V



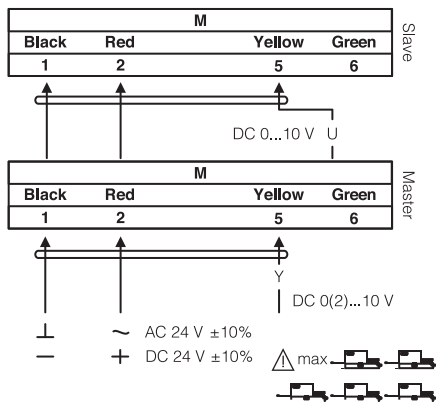
## DIRECTION OF ROTATION NABM...05

Default factory setting: CCW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.

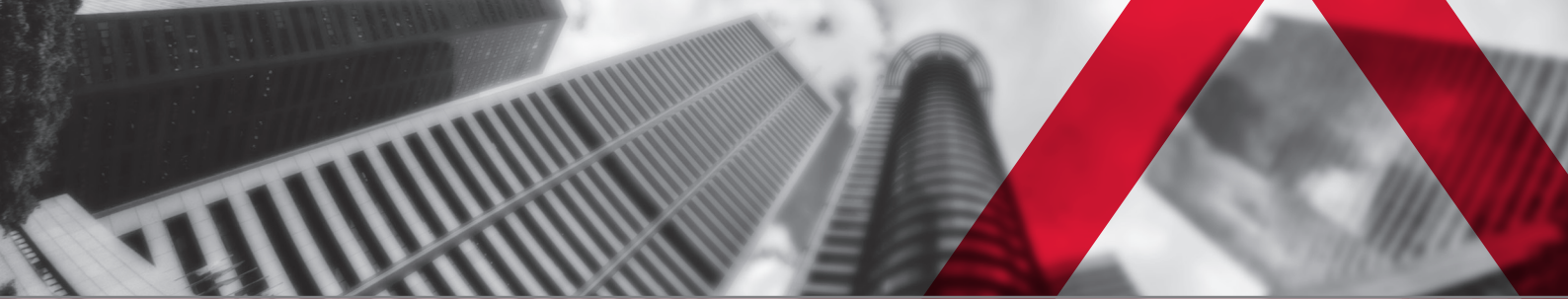


## WIRING DIAGRAM NABM...05 PARALLEL CONNECTION



## REMARK

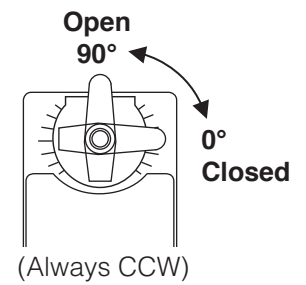
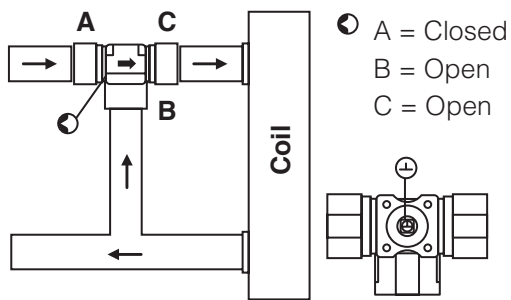
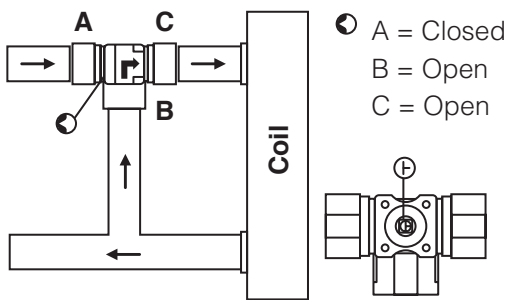
During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator.



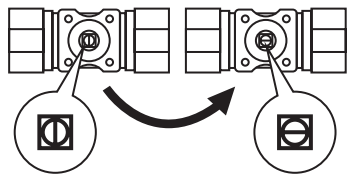
### MIXING CLOSED

### MIXING OPEN

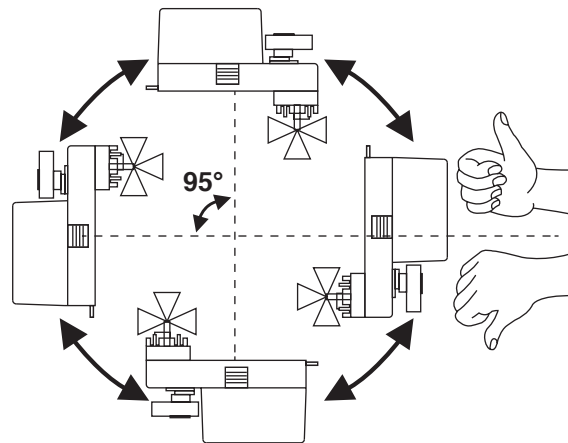
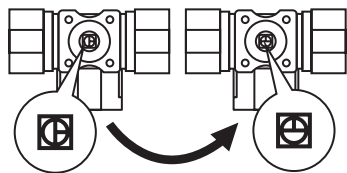
### ACTUATOR POSITION



#### 2-way Closed 2-way Open



#### 3-way Closed 3-way Open



### IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.

This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

AC / DC 24 V: Connect via safety isolating transformer.  
 AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its products.

**SWISS<sup>+</sup>**  
TECHNOLOGY

# **NABA SERIES BALL VALVE ACTUATOR**

**2 Point & 3 Point Control  
10 Nm**

**NENUTE<sup>®</sup>EC**

INNOVATIVE MEMBER OF SWIS<sup>+</sup>TEC

# NABA SERIES BALL VALVE ACTUATOR

2 Point & 3 Point Control  
10 Nm



## NABA...10 (S1) HN SERIES

NABA series standard valve actuators are especially designed and produced for applications in the HVAC systems. Our wide range of standard valve actuators has been developed to operate and position ball valves of different sizes.

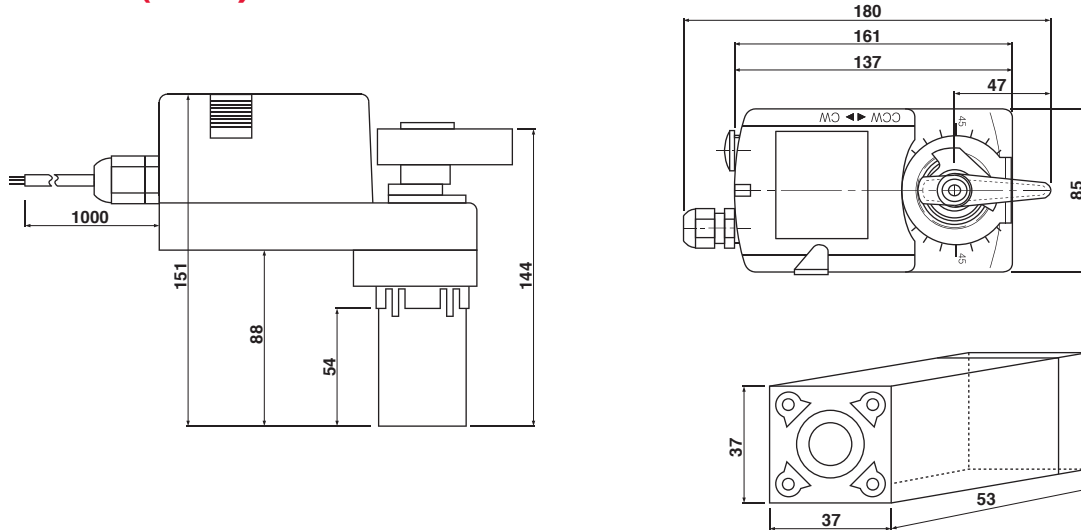
### PRODUCT FEATURE

- Torque 10 Nm
- Valve size DN40(1½") / DN50(2")
- Power supply AC/DC 24 V and AC 230 V
- Shaft dimensions - □ 9.0 mm (fixed)
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Adjustable SPDT auxiliary switches

### MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NABA 1-10 HN	10 Nm	AC/DC 24 V ± 10%	100...120 sec	-
NABA 1-10S1 HN	10 Nm	AC/DC 24 V ± 10%	100...120 sec	1 x SPDT (Adjustable)
NABA 2-10 HN	10 Nm	AC 230 V ± 10%	100...120 sec	-
NABA 2-10S1 HN	10 Nm	AC 230 V ± 10%	100...120 sec	1 x SPDT (Adjustable)

## DIMENSION (mm)



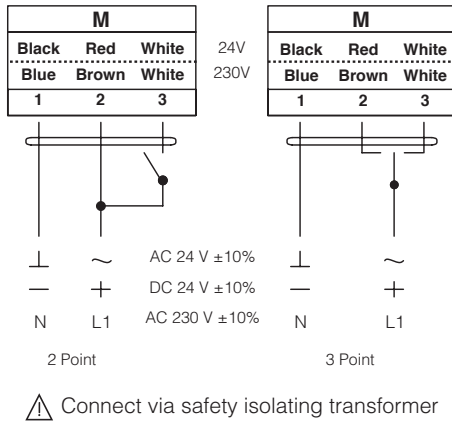
## TECHNICAL SPECIFICATION

MODEL NUMBER	NABA 1-10 (S1) HN	NABA 2-10 (S1) HN
TORQUE	10 Nm	10 Nm
VALVE SIZE	DN40(1½") / DN50(2")	DN40(1½") / DN50(2")
SHAFT DIMENSION	□ 9.0 mm (fixed)	□ 9.0 mm (fixed)
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 & 3 point control	2 & 3 point control
POWER CONSUMPTION		
● OPERATING	6.0 W	6.0 W
● END POSITION	4.0 W	4.0 W
FOR WIRE SIZING	6.5 VA	6.5 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	< 1.1 Kg	< 1.2 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

# NABA SERIES BALL VALVE ACTUATOR

2 Point & 3 Point Control  
10 Nm

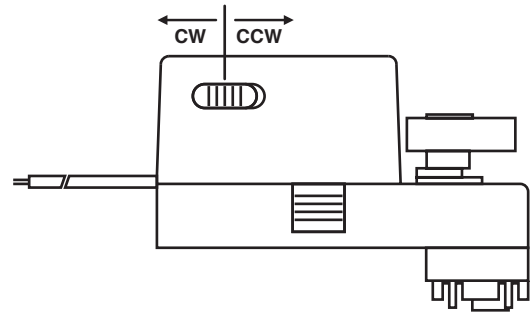
## WIRING DIAGRAM NABA...10 (S1) HN POWER SUPPLY AC/DC 24V / AC 230V



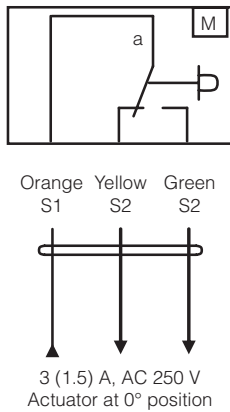
## DIRECTION OF ROTATION NABA...10 (S1) HN

Default factory setting: CCW.

Direction of rotation can be change by toggling between CW/CCW switch on the actuator's housing.



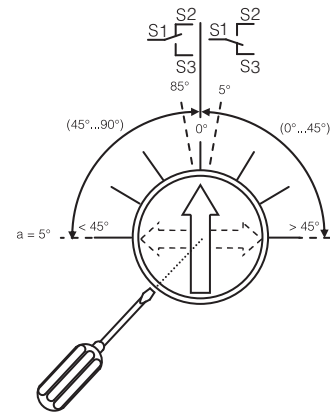
## WIRING DIAGRAM NABA...10 (S1) HN AUXILIARY SWITCH



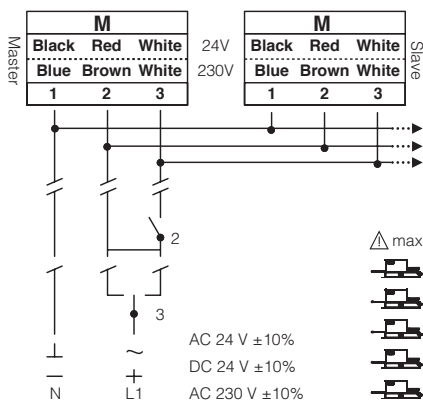
## AUXILIARY SWITCH NABA...10 (S1) HN

Switch **a** factory-set at 5°.

The auxiliary switch can be optimally adjusted between 0°...90°.



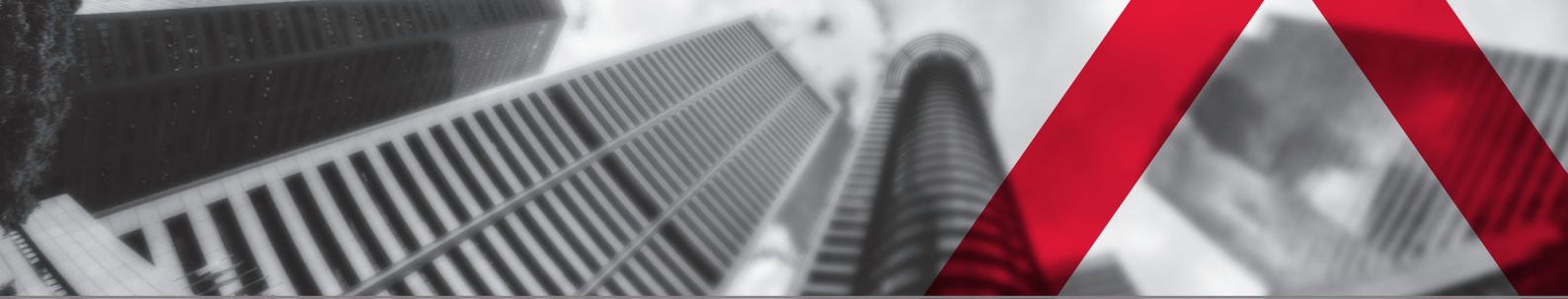
## WIRING DIAGRAM NABA...10 (S1) HN PARALLEL CONNECTION



## REMARK

Parallel connection of NABA...10 (S1) HN actuators are limited to 5. Power consumption must be observe.

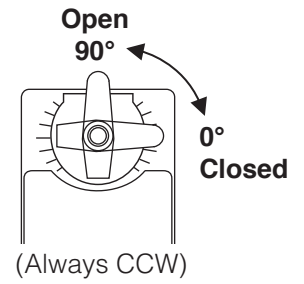
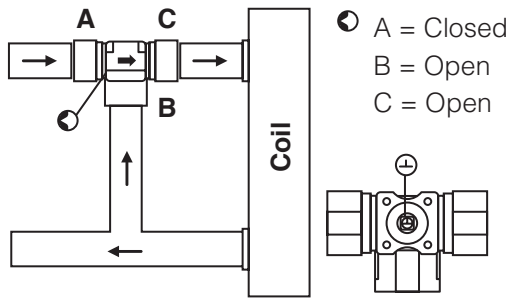
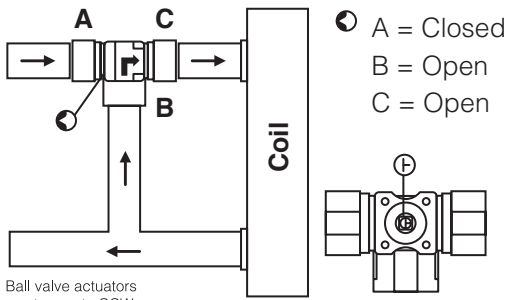




### MIXING CLOSED

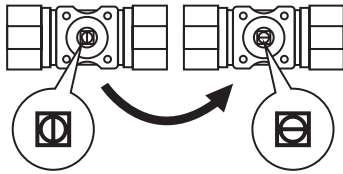
### MIXING OPEN

### ACTUATOR POSITION

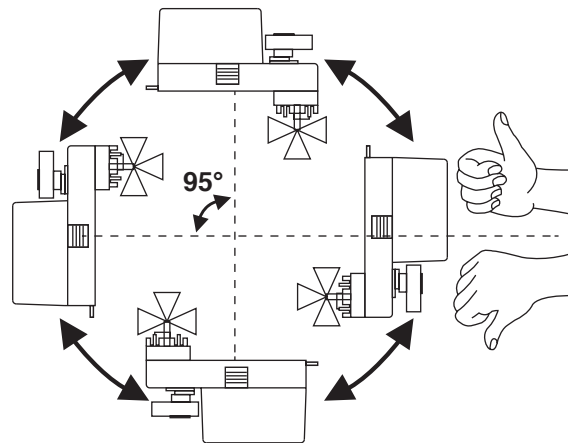
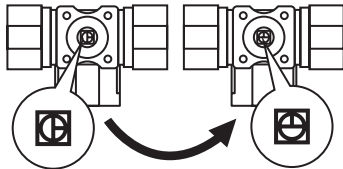


Ball valve actuators must operate CCW.

### 2-way Closed 2-way Open



### 3-way Closed 3-way Open



## IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.

This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.

AC / DC 24 V: Connect via safety isolating transformer.  
 AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its products.

**SWISS<sup>+</sup>**  
TECHNOLOGY

# **NABM SERIES BALL VALVE ACTUATOR**

**Modulating Control  
10 Nm**

**NENUTE<sup>®</sup>EC**

INNOVATIVE MEMBER OF SWIS<sup>+</sup>TEC

# NABM SERIES BALL VALVE ACTUATOR

Modulating Control  
10 Nm



## NABM...10 HN (S1) SERIES

NABM series standard valve actuators are especially designed and produced for applications in the HVAC systems. Our wide range of standard valve actuators has been developed to operate and position ball valves of different sizes.

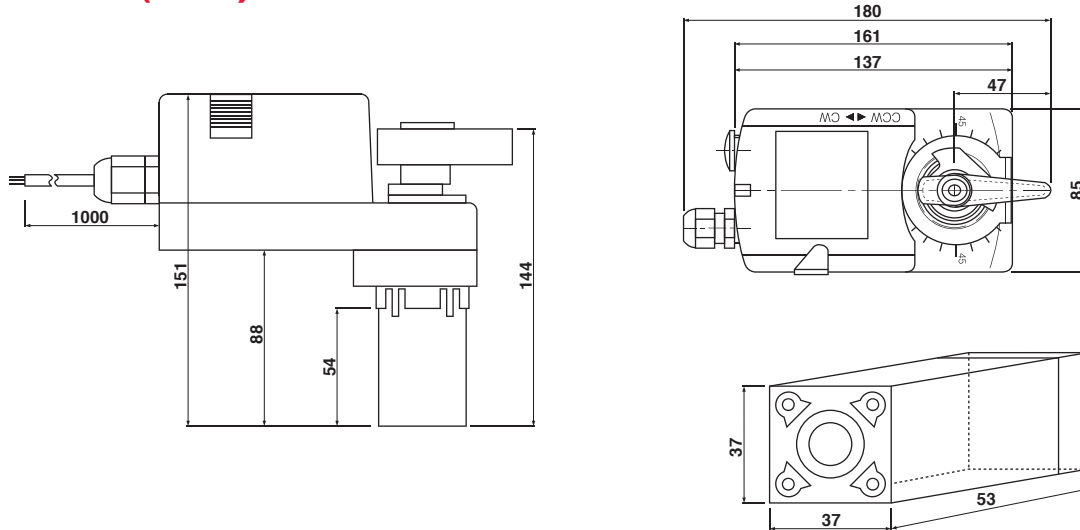
### PRODUCT FEATURE

- Torque 10 Nm
- Valve size DN40(1½") / DN50(2")
- Power supply AC/DC 24 V / AC2 30V
- Control Modulating DC 0(2)...10 V & DC 0(4)...20 mA
- Shaft dimensions - □ 9.0 mm (fixed)
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Adjustable SPDT auxiliary switch

### MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NABM 1.1-10 HN	10 Nm	AC/DC 24 V $\pm$ 10%	100...150 sec	-
NABM 1.1-10S1 HN	10 Nm	AC/DC 24 V $\pm$ 10%	100...150 sec	1 x SPDT (Adjustable)

## DIMENSION (mm)



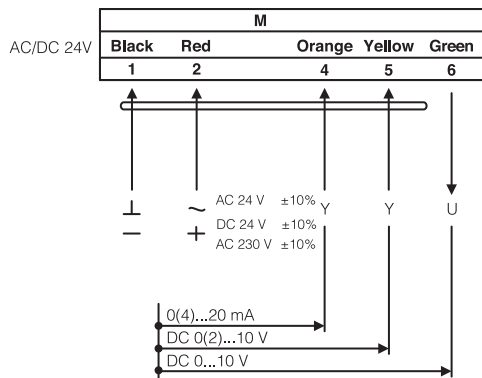
## TECHNICAL SPECIFICATION

<b>MODEL NUMBER</b>	<b>NABM 1.1-10 (S1) HN</b>
<b>TORQUE</b>	10 Nm
<b>VALVE SIZE</b>	DN40(1½") / DN50(2")
<b>SHAFT DIMENSION</b>	□ 9.0 mm (fixed)
<b>POWER SUPPLY</b>	AC/DC 24 V ± 10%
<b>FREQUENCY</b>	50...60 Hz
<b>CONTROL SIGNAL (INPUT)</b>	DC 0(2)...10 V / 0(4)...20 mA
<b>POSITION SIGNAL (OUTPUT)</b>	DC 0...10 V
<b>POWER CONSUMPTION</b>	
● OPERATING	6.0 W
● END POSITION	4.0 W
<b>FOR WIRE SIZING</b>	6.5 VA
<b>ELECTRICAL CONNECTION</b>	1 m Cable
<b>AUXILIARY SWITCH RATING</b>	3 (1.5) A, AC 250 V
<b>PROTECTION CLASS</b>	Class III ⚡
<b>ANGLE OF ROTATION</b>	90° (95° mechanical)
<b>WEIGHT</b>	< 1.1 Kg
<b>LIFE CYCLE</b>	60,000 Rotation
<b>SOUND LEVEL</b>	40 dB
<b>IP PROTECTION</b>	IP54
<b>OPERATING TEMPERATURE</b>	-20°...50° as per IEC 721-3-3
<b>NON-OPERATING TEMPERATURE</b>	-30°...+60° C / IEC 721-3-2
<b>AMBIENT HUMIDITY</b>	5%...95% rH non condensing / EN
<b>MAINTENANCE</b>	Maintenance Free
<b>MODE OF OPERATION</b>	Type I / EN 60730-1
<b>EMC</b>	CE & ISO 9000 EN / EEC

# NABM SERIES BALL VALVE ACTUATOR

Modulating Control  
10 Nm

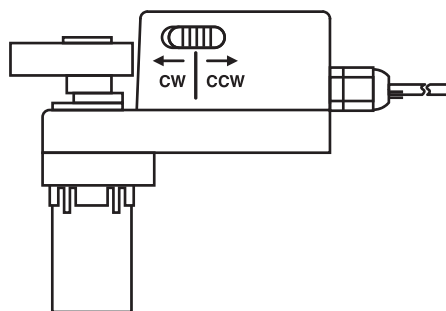
## WIRING DIAGRAM NABM...10 (S1) HN POWER SUPPLY AC/DC 24V



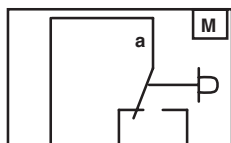
## DIRECTION OF ROTATION NABM...10 (S1) HN

Default factory setting: CCW.

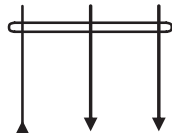
Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



## WIRING DIAGRAM NABM...10 (S1) HN AUXILIARY SWITCH



Orange Yellow Green  
S1 S2 S2

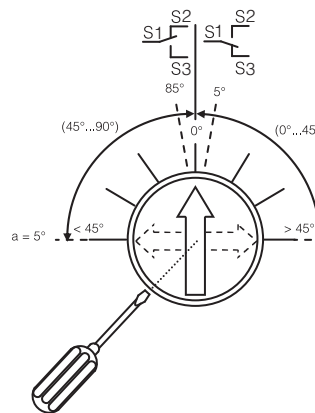


3 (1.5) A, AC 250 V  
Actuator at 0° position

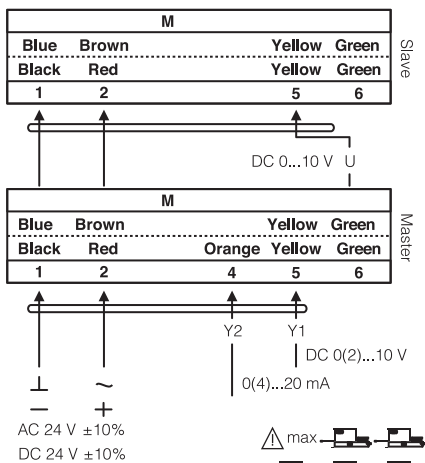
## AUXILIARY SWITCH NABM...10 (S1) HN

Switch **a** factory-set at 5°.

The auxiliary switch can be optimally adjusted between 0°...90°.

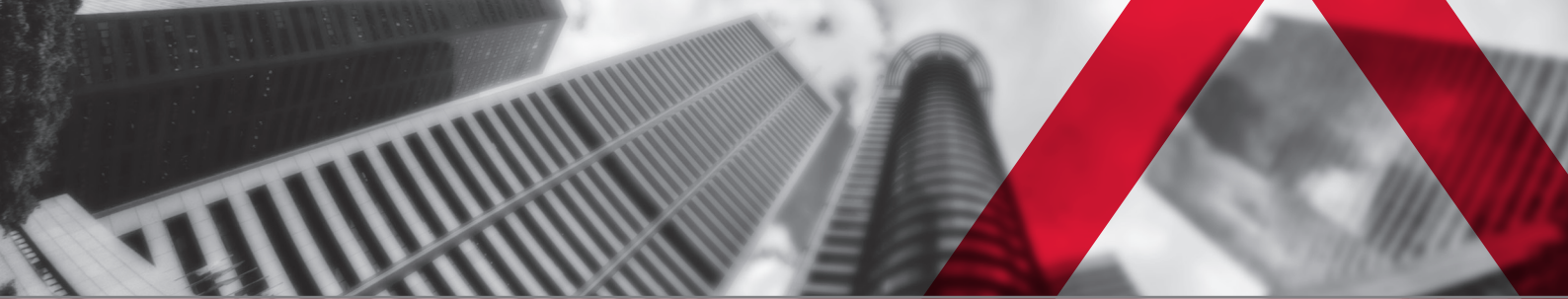


## WIRING DIAGRAM NABM...10 (S1) HN PARALLEL CONNECTION



## REMARK

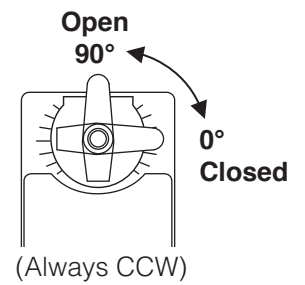
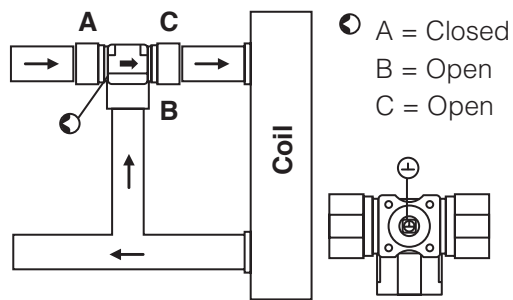
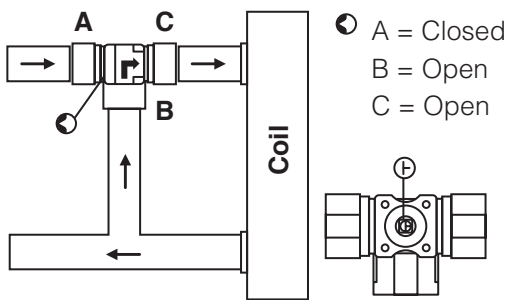
During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator.



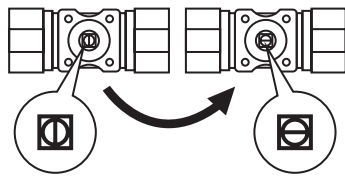
### MIXING CLOSED

### MIXING OPEN

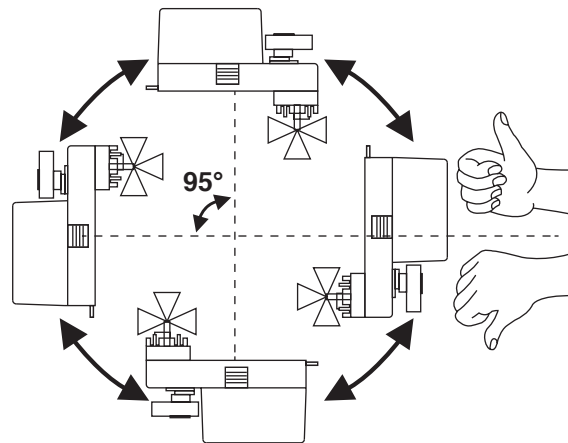
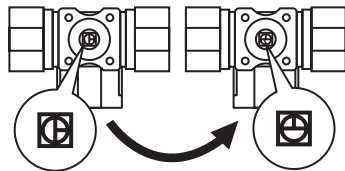
### ACTUATOR POSITION



#### 2-way Closed 2-way Open



#### 3-way Closed 3-way Open



### IMPORTANT REMARK

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AC / DC 24 V: Connect via safety isolating transformer.  
 AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

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