

# 1118 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

## FEATURES

The 1118 triple-offset butterfly valve is a high-performance valve. It is designed for the automatic shut-off of high-pressure and/or high-temperature fluid pipes such as steam, bitumen, heating oils, etc. The valve has a direction of mounting, but the seat leakage is, however, bi-directional. The single-block stem of the butterfly is mounted on bearings and has an antistatic device. Due to its fire safe construction, the valve can be used for hydrocarbons. The ISO 5211 mounting pad enables standardised actuators to be mounted.



NA



NA-X



with NA-X



## AVAILABLE MODELS

DN 100 to DN 300, FAF according to EN 558-1 series 109.

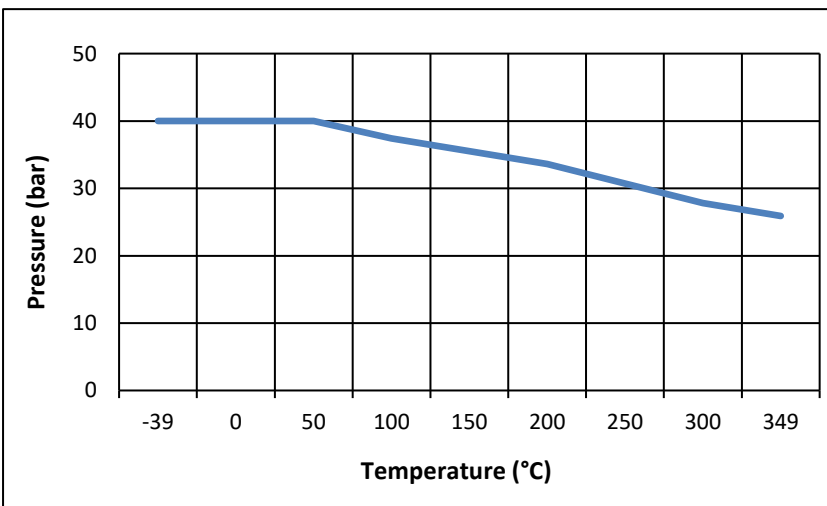
“LUG” wafer mounting PN40.

230V AC, three-phase 400V supply voltages.



## LIMITS OF USE

|                       |                       |
|-----------------------|-----------------------|
| Fluid pressure: PS    | 40 VA Maxi            |
| Fluid temperature: WT | Steel: -39°C / +349°C |
| Ambient temperature   | -20°C / +70°C         |
| Service factor        | S2 - 70%              |



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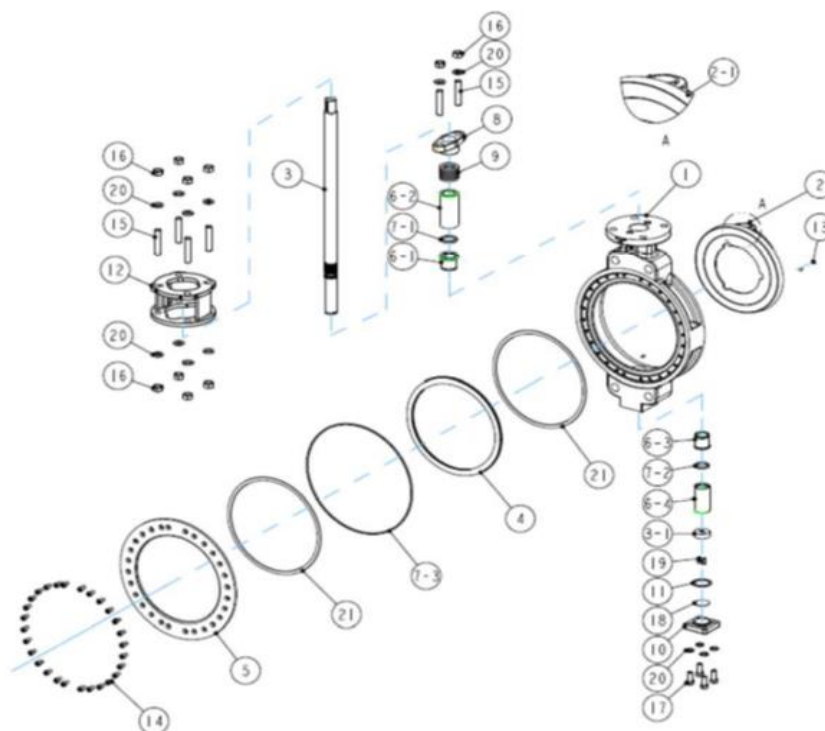
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# 1118 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

## DIRECTIVES AND MANUFACTURING STANDARDS

| OBJECT                                  | Standard                   | OBJECT                  | Standard               |
|-----------------------------------------|----------------------------|-------------------------|------------------------|
| Pressure Equipment Directive 2014/68/EC | Cat.III Module H - CE 0035 | Face-to-face dimension  | ISO 558 series 109     |
| ATEX Directive                          | EN 13463-1: II 2G/D        | Line leak-tightness     | ANSI/FCI 70-2          |
| Construction                            | API 609                    | Final test              | ISO 5208 and MSS SP-61 |
| Body materials                          | EN 1503-2                  | Fire safe               | ISO 10497: 2010        |
| Material certificate                    | EN 10204                   | Connection Motorisation | ISO 5211               |
| Flange dimension                        | EN 1092-1                  |                         |                        |

## CONSTRUCTION



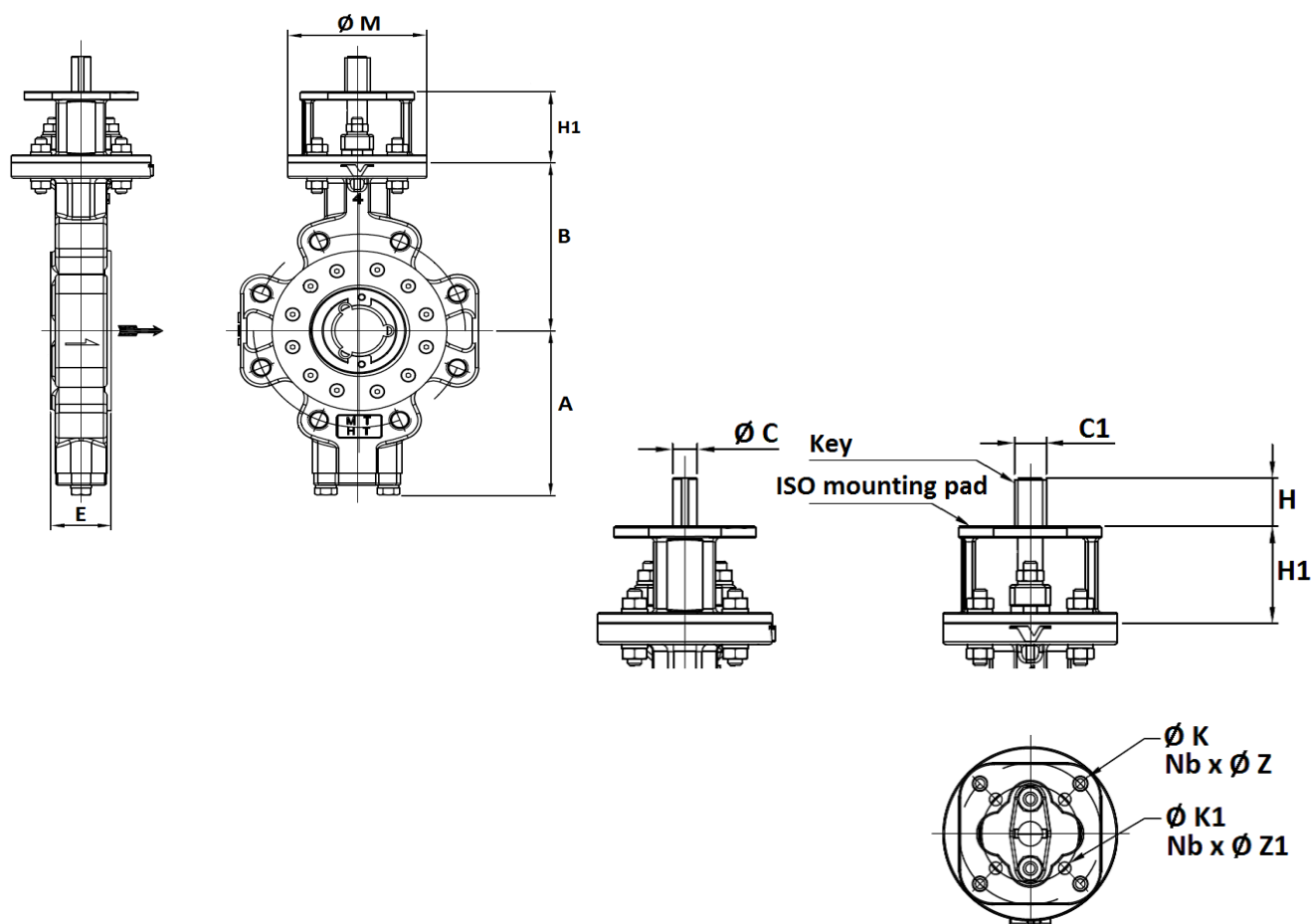
| No.        | Name                | Material                       | No. | Name                 | Material            |
|------------|---------------------|--------------------------------|-----|----------------------|---------------------|
| 1          | Body                | ASTM A216 WCB steel            | 11  | Plug gasket          | Graphite            |
| 2          | Butterfly           | ASTM A351 CF8M stainless steel | 12  | Yoke                 | ASTM A216 WCB steel |
| 2-1        | Disc seat           | Stellite Grade 6               | 13  | Stud                 | A193 B8M            |
| 3          | Stem                | A479 XM-19                     | 14  | Holding flange screw | A193 B8             |
| 3-1        | Ring                | A479 XM-19                     | 15  | Stud                 | A193 B8             |
| 4          | Laminated body seat | A479 WM-19 + Graphite          | 16  | Nut                  | A194/8              |
| 5          | Holding flange      | ASTM A351 CF8 stainless steel  | 17  | Screw                | A193 B8             |
| 6-1 to 6-4 | Ring                | AISI 316 SS + RTFE             | 18  | Washer               | AISI 316 SS + RTFE  |
| 7-1 to 7-3 | Gasket              | Graphite                       | 19  | Screw                | A193 B8             |
| 8          | Gland follower      | ASTM A351 CF8 stainless steel  | 20  | Elastic washer       | A240 304 SS         |
| 9          | Packing gland       | Graphite                       | 21  | Gasket               | Graphite            |
| 10         | Plug                | ASTM A216 WCB steel            |     |                      |                     |

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|                                                                                     |                                                                                                                                                                                                                                      |       |                |
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# 1118 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

## DIMENSIONS (mm)



| DN  | E  | B   | H  | H1  | ØM  | Ø K | Ø K1 | ØC    | C1    | Weight (in Kg) |
|-----|----|-----|----|-----|-----|-----|------|-------|-------|----------------|
| 100 | 54 | 165 | 35 | 70  | 125 | 102 | 70   | 17.9  | 22.9  | 15             |
| 150 | 61 | 215 | 45 | 70  | 125 | 102 | 70   | 21.85 | 27.85 | 22             |
| 200 | 75 | 260 | 45 | 80  | 150 | 125 | 102  | 29.85 | 35.85 | 50             |
| 250 | 83 | 310 | 65 | 100 | 175 | 140 | 125  | 37.7  | 43.7  | 91             |
| 300 | 92 | 335 | 65 | 120 | 210 | 165 | 140  | 44.7  | 50.7  | 131            |

## FLOW-RATE COEFFICIENT Kv (m³/h)

| DN | 100   | 150   | 200    | 250    | 300    |
|----|-------|-------|--------|--------|--------|
| Kv | 169.5 | 519.8 | 1072.5 | 2076.6 | 2419.1 |

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# 1118 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

## NA ELECTRICAL MOTORISATION

The NA motorisation proposed as standard comprises:

- IP67 epoxy coated aluminium housing for actuator and steel gear box.
- a safety coefficient of 1.3 minimum compared to the nominal torque of the valve.
- an upstream / downstream pressure difference  $\Delta P=25$  bar max.

The actuator mount is a steel yoke + driver.

| DN  | Actuator | Power (W) | Time (s)* | Standard equipment of the actuator                                                                                                                                                                                                   |
|-----|----------|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 100 | NA 28    | 40 W      | 24 s      | 2 adjustable limit switches + 2 dry auxiliaries<br>Condensation-resistance 20 W<br>Position visual indicator<br>Torque limiter (NA28 to NA150)<br><b>Electrical connection:</b> 2 x M20 x 1.5 glands<br>Manual override by handwheel |
| 150 | NA 60    | 90 W      | 29 s      |                                                                                                                                                                                                                                      |
| 200 | NA 60    | 90 W      | 29 s      |                                                                                                                                                                                                                                      |
| 250 | NA 100   | 180 W     | 29 s      |                                                                                                                                                                                                                                      |
| 300 | NA 150   | 90 W      | 87 s      |                                                                                                                                                                                                                                      |

For any other operating conditions, please contact us.

\* indicative time for actuator running empty

## MOTORISATION OPTIONS

There are many options, so please contact our sales service for more information on these:

| 1                                                                                   | 2                                                                                                  | 3                                                                                   | 4                                                                                     | 5                                                                                     |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>NA LCU:</b><br>Local control unit actuator                                       | <b>NA PCU:</b><br>4-20mA or 0-10V proportional control unit actuator                               | <b>NA RBP:</b><br>fail safe/security electric actuator                              | <b>NA-X:</b><br>zone ATEX 1 and 2 actuator                                            | <b>SR:</b><br>spring return fail safe actuator                                        |
|  |                 |  |  |  |
| 6                                                                                   | actuator dimensioned for an upstream/downstream pressure difference $\Delta P$ greater than 10 bar |                                                                                     |                                                                                       |                                                                                       |
| 7                                                                                   | NA actuator with handwheel override                                                                |                                                                                     |                                                                                       |                                                                                       |

## INSTALLATION IN AN ATEX ZONE

For 1118+NA-X automatic valves to be installed in ATEX 1 or 2 zones, this has to be specified when ordering. Our services will check of the assembly, the installation of an earthing braid, and will issue an assembly certificate. Our authorised technicians carry out these operations in the workshop. Please contact us.

The special assembly and maintenance instructions for motorised valves in the ATEX zones must be followed.

The ATEX glands and plug are not included in the supply. Use the following codes:

|                              |             |                             |             |
|------------------------------|-------------|-----------------------------|-------------|
| Aluminium gland M20x1.5 ATEX | Code 980179 | Aluminium plug M20x1.5 ATEX | Code 980180 |
|------------------------------|-------------|-----------------------------|-------------|

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## STORAGE INSTRUCTIONS

Follow our “IMESTOCK” instructions for storage

## ASSEMBLY INSTRUCTIONS

### 1 - Checks

- Check that the material of the valve body is chemically compatible with the fluid.
- Check that the pressure and service conditions are compatible with the (P, T) diagram of the valve. See § “Service limits”.
- Check that the fluid is clean and free of particles. The latter could scratch the butterfly and damage the seats, hence causing the valve to leak. If need be, install an upstream filter.
- Check that the valve is not used for flow or pressure control since it is not intended for this use and there is a risk of premature wear of the seat, in particular in the event of high pressure and/or temperature. For this special application, please contact us.
- Check that the valve is not used on a gas which might condense at certain times during the process. In such a case, the pressure could become negative, which could lead to a significant deformation of the seat. Please contact us.
- Static electricity: the valve will be supplied with a ball-stem-body internal electrical continuity tester. If the service conditions require the electrical continuity of the installation, check its earthing.
- Check the perfect alignment of the upstream and downstream pipe installation. Wafer-type valves such as 1118 are sensitive to this parameter. An alignment fault would lead to a butterfly blockage.
- Also check the pipe installation support. In the event of a fault in the latter, the valve would undergo too high mechanical stress which could damage it.
- You must follow the additional “IMEVMATEX” instructions if the valve is installed in an explosive zone.

### 2 - Place of installation

The **1118** + NA automatic valves can be installed both indoors and outdoors, while complying with the temperature limits given.

If the valve is equipped with accessories (switch box, pilot solenoid valve), check their service temperatures and their IP code depending upon the place of installation.

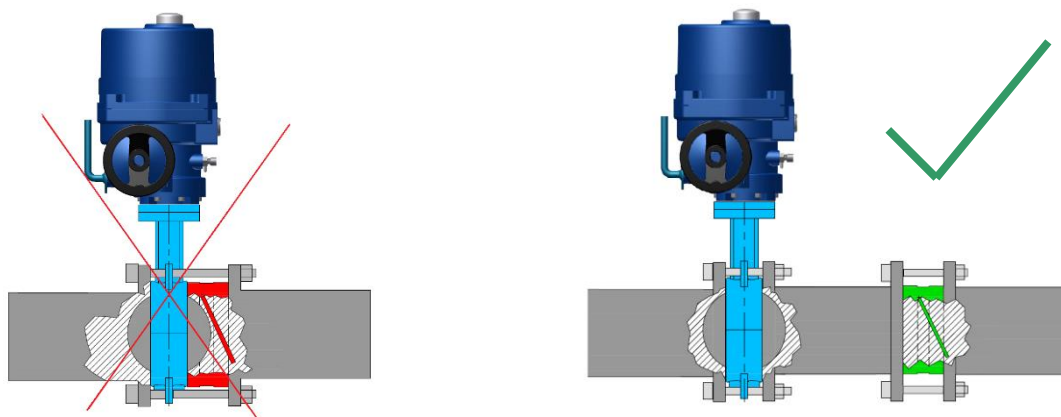
### 3 - Butterfly blockage

The valve must be installed on a pipe installation section which allows the butterfly to move freely.

At opening, the butterfly protrudes from the body according to the lengths shown in the table below.

| DN              | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
|-----------------|-----|-----|-----|-----|-----|-----|-----|
| Protrusion (mm) | 22  | 45  | 65  | 85  | 104 | 121 | 141 |

You must take this into account when mounting and not about another valve element immediately upstream and downstream which could block the movement of the butterfly (e. g. a swing valve).



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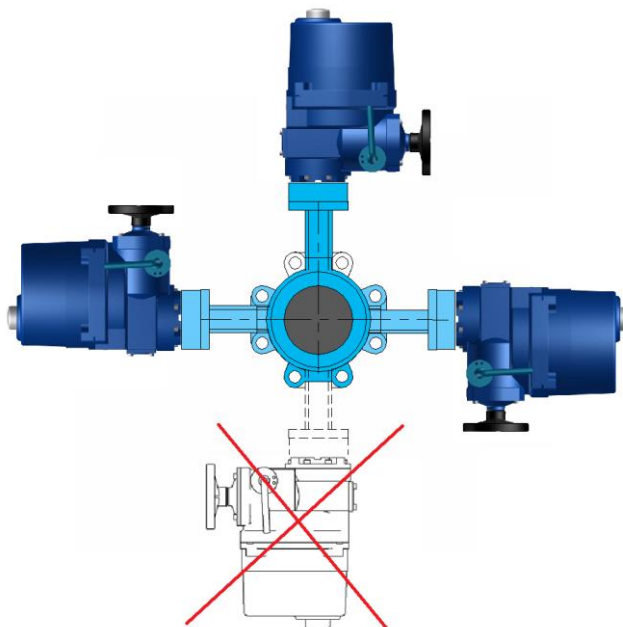
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## 1118 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

### 4 - Valve positions on the pipe installation

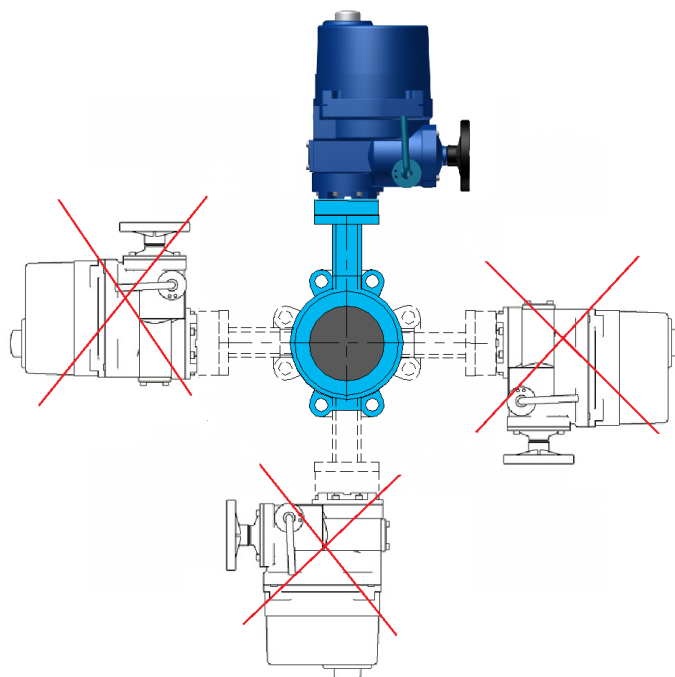
The automatic valve has to be mounted either vertically or horizontally with an actuator, as shown in the diagram below:

DN100 – DN150



DN200 - DN400

Authorised with  
suitable support



Authorised with  
suitable support

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|                                                                                     |                                                                                                                                                                                                                                                                                  |       |                |
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# 1118 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

## 5 - Mounting at the end of a line

1118 butterfly valves can be installed at the end of a line.

## 6 - Pipe installation cleaning

The sealing system of the 1118 valve can be easily damaged by the impurities in the flow. Check that the fluid flowing through the valve is clean. Check the strict cleanliness of the upstream and downstream pipe installation. Clean the piping (brazing residues, metal swarf, sealing material, etc.) before installing the valve.

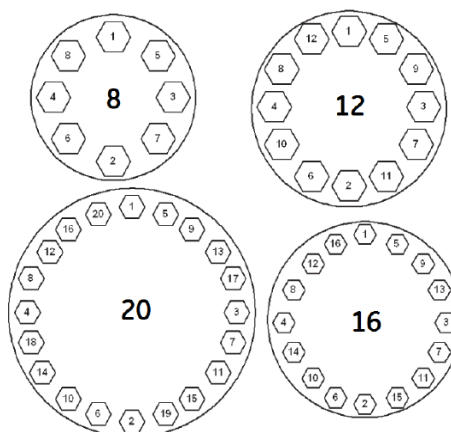
## 7 - Installation

- Before any installation, cut-off the piping upstream and downstream, depressurize the ductwork installation, and bring the installation to ambient temperature. Carefully clean the pipe installation of any particles (foreign body, dusts, rust, etc.) or shavings by rinsing with water or by blowing air through it.
- Make provision for the use of a hoist.
- Remove the protective covers from the valve flanges.
- Check the cleanliness of the internal surfaces of the valve and clean them if need be.
- Direction of installation: follow the preferred direction of installation.
- Check that the standards for the valve flanges (PN40 as per EN 1092-1) and the pipe installation, are the same.
- Select flange gaskets suitable for the fluid and the flange standard for the valve (PN40).
- Stock up on hex-head nuts and bolts as shown in the table below:

| DN  | Bolt*   | Number | Tightening torque (Nm) |
|-----|---------|--------|------------------------|
| 100 | M20x80  | 8      | 270                    |
| 150 | M24x90  | 8      | 450                    |
| 200 | M27x100 | 12     | 700                    |
| 250 | M30x110 | 12     | 950                    |
| 300 | M30x140 | 16     | 950                    |
| 350 | M33x140 | 16     | 1300                   |
| 400 | M36x140 | 16     | 1700                   |

\*Theoretical length for 2 mm thick flange seals.

- Screw-in the screws through the flanges as shown in the diagram below and apply the torques shown in the table below. Follow a symmetrical tightening cross pattern in order to apply a uniform tightening torque on the gasket seats.



- Check the sealing of the connection using a suitable test (hydrostatic test or leak detection spray).
- Hydraulic test of the installation
  - Valves were tested at the factory at 1.5 x WP.
  - If a hydrostatic test is carried out on the installation, do not exceed the authorised pressure.

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# 1118 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

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## 8 - Connection to the electrical power supply network

Follow the instructions of the "NA actuator" IME manual

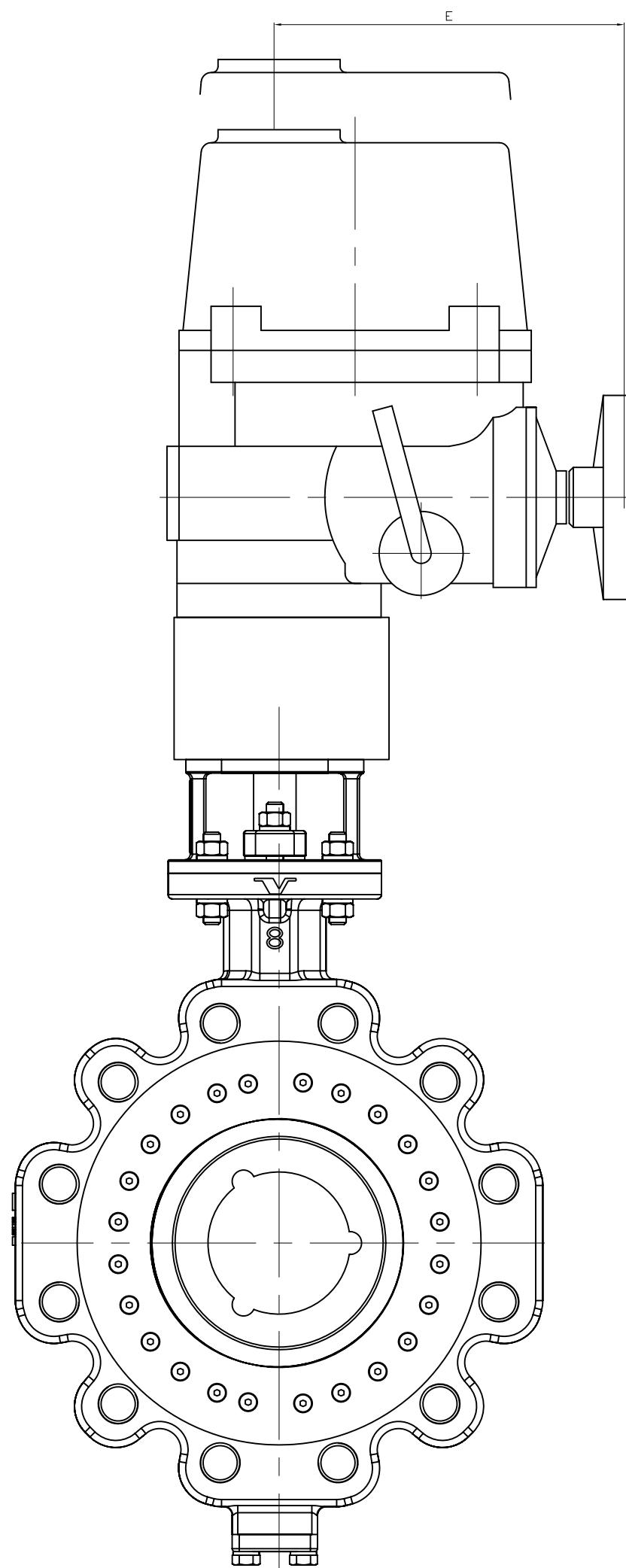
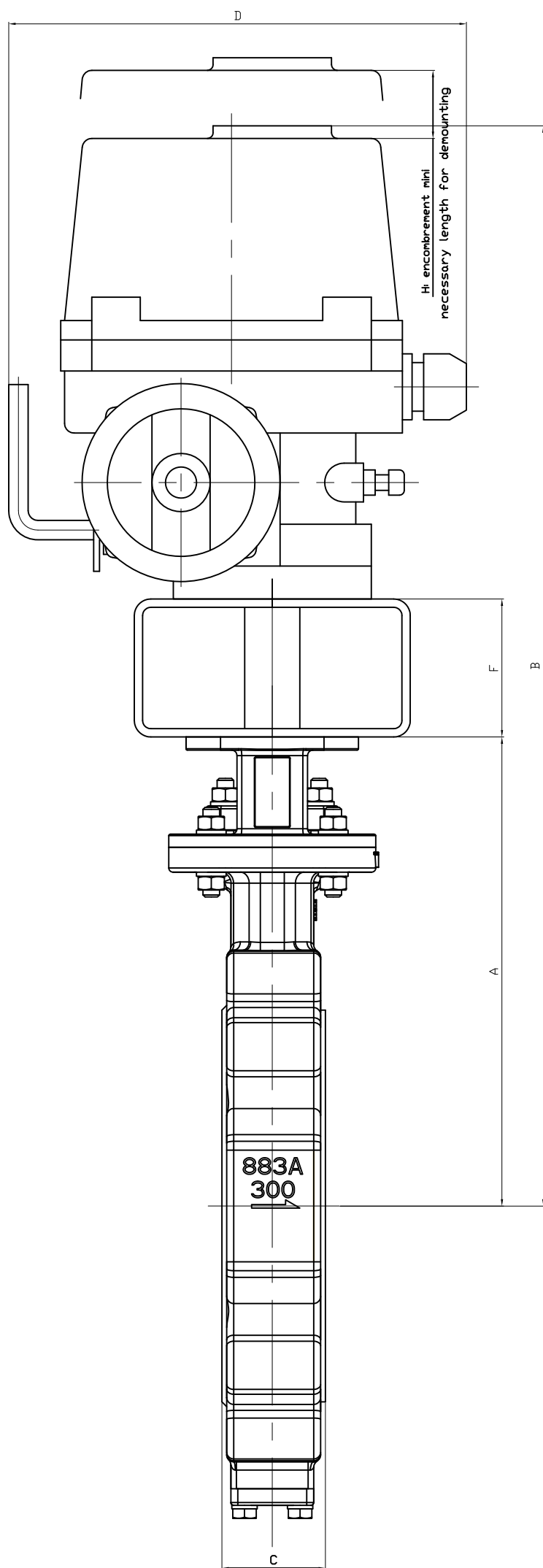
## 9 - Operating test

After making the electrical connection, perform an opening test for opening and closing.

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|          |      |      |      |       |       |
|----------|------|------|------|-------|-------|
| DN       | 100  | 150  | 200  | 250   | 300   |
| NA-NAX   | 28   | 60   | 60   | 100   | 150   |
| A        | 235  | 285  | 340  | 410   | 455   |
| B        | 617  | 708  | 763  | 853   | 1111  |
| C        | 54   | 61   | 75   | 83    | 92    |
| D        | 300  | 349  | 349  | 349   | 388   |
| E        | 202  | 226  | 226  | 226   | 226   |
| F        | 80   | 80   | 80   | 100   | 100   |
| H        | 130  | 178  | 178  | 178   | 178   |
| Poids Kg | 36.8 | 51.1 | 79.1 | 122.9 | 201.7 |

|                                                                                                                                              |                  |                    |                                |                                       |      |      |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|--------------------------------|---------------------------------------|------|------|
| Ech: /                                                                                                                                       | Date :28/03/2017 | Dessiné par : E.D. | Tolérances générales : +/- 0.2 | Modifications                         | Date | REV. |
| ROBINET A PAPILLON A TRIPLE EXCENTRATION<br>1118/TRIPLE ECCENTRIC BUTTERFLY VALVE 1118 +<br>SERVOMOTEUR NA-NAX/ELECTRICAL ACTUATOR<br>NA-NAX |                  |                    |                                | Matière :                             |      |      |
|  45, Rue du Ruisseau<br>38297 SAINT QUENTIN FALLAVIER    |                  |                    |                                | Poids (Kg) :                          |      |      |
|                                                                                                                                              |                  |                    |                                | Traitement : SANS<br>Plan n° Ens 1289 |      |      |

# NA / NA-X ELECTRIC ACTUATOR

## FEATURES

The NA electric actuator is intended for motorising industrial ¼ turn valves. The torque is 2500 Nm maximum. With a robust construction and IP67 epoxy-coated aluminium housing, the NA actuator is especially well suited for motorising ball valves and butterfly valves installed in workshops or outdoors. It has handle override and torque limiters (part for NA06 and NA09). Many available options. The NA-X version can be used in the 1 and 2 explosive atmospheres. Compliant with the EN 15714-2 standard.

## AVAILABLE MODELS

**NA06: 60 Nm to NA250: 2500 Nm**

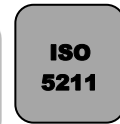
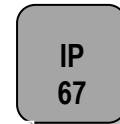
**Supply voltages:** 230 Vac, 400 Vac, 24 Vac, 24 Vdc



Version NA



Version NA-X



NA-X version

## LIMITS OF USE

| Version               | NA             | NA-X          |
|-----------------------|----------------|---------------|
| IP Code               | IP 67          |               |
| Ambient temperature   | - 20°C / +70°C | -20°C / +55°C |
| Service factor        | S2-70%         |               |
| Explosive atmospheres | forbidden      | Zones 1 and 2 |

## MECHANICAL FEATURES

|                         |                          |
|-------------------------|--------------------------|
| Gear box                | treated steel pinions    |
| Angle of rotation angle | 90° +/- 5°               |
| Declutching             | by lever                 |
| Override control        | by wheel                 |
| Torque limiter          | Apart from NA06 and NA09 |



| Actuator             | NA06 | NA09 | NA15    | NA28    | NA38    | NA60    | NA100   | NA150   | NA200   | NA250   |
|----------------------|------|------|---------|---------|---------|---------|---------|---------|---------|---------|
| Torque (Nm)          | 60   | 90   | 150     | 280     | 380     | 600     | 1000    | 1500    | 2000    | 2500    |
| Manoeuvring time (s) | 17   | 17   | 20      | 24      | 24      | 29      | 29      | 87      | 87      | 87      |
| ISO 5211             | F07  | F07  | F07/F10 | F10/F12 | F10/F12 | F12/F14 | F12/F14 | F14/F16 | F14/F16 | F14/F16 |
| Drive star           | 17   | 17   | 17      | 22      | 27      | 27      | 27      | 36      | 36      | 46      |

## DIRECTIVES AND MANUFACTURING STANDARDS

|                                                                                    |                                           |
|------------------------------------------------------------------------------------|-------------------------------------------|
| 2006/42/EC machine                                                                 | Connection to valves: ISO 5211            |
| Low voltage 2006/95/EC                                                             | 2004/108/EC electromagnetic compatibility |
| ATEX 1994/9/EC: ATEX II 2 G EEx d II B T4 – NEMKO 03ATEX1342X (only NA-X actuator) |                                           |

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# NA / NA-X ELECTRIC ACTUATOR

## MANUFACTURING

|    |                          |                 |
|----|--------------------------|-----------------|
| 1  | Position indicator       | Polycarbonate   |
| 2  | Condenser                |                 |
| 3  | Wiring terminal box      |                 |
| 4  | Limit switches           |                 |
| 5  | Body                     | Aluminium alloy |
| 6  | Base                     | Aluminium alloy |
| 7  | Drive bushing            | Steel           |
| 8  | Dome                     | Polycarbonate   |
| 9  | Electrical motor         |                 |
| 10 | Anti-condensation heater |                 |
| 11 | Wheel                    | Steel           |
| 12 | Handle override          | Steel           |
| 13 | Declutching lever        | Steel           |
| 14 | Worm drive               | Steel           |



## ELECTRICAL FEATURES

|                           |                           |                                   |                                                   |
|---------------------------|---------------------------|-----------------------------------|---------------------------------------------------|
| <b>Motor protection</b>   | Thermal                   | <b>Anti-condensation</b>          | 20 W heater                                       |
| <b>Limit switches</b>     | 2 adjustable switches     | <b>NA electrical connection</b>   | 2 x C.G. M20x1.5                                  |
| <b>Auxiliary switches</b> | 2 adjustable dry switches | <b>NA-X electrical connection</b> | 2 x C.G. M20x1.5 ATEX<br>(NOT SUPPLIED on option) |

| Actuator            | NA06        | NA09  | NA15  | NA28  | NA38  | NA60  | NA100 | NA150 | NA200 | NA250 |
|---------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Power (W)           | 15          | 25    | 40    | 40    | 60    | 90    | 180   | 98    | 180   | 180   |
| Voltage             | 380V – 50Hz |       |       |       |       |       |       |       |       |       |
| Holding current (A) | 00:13       | 00:18 | 0.3   | 0.3   | 00:33 | 00:52 | 0.73  | 00:52 | 0.73  | 0.73  |
| Inrush current (A)  | 00:23       | 00:36 | 00:59 | 0.74  | 0.78  | 01:24 | 1.68  | 0.78  | 1.68  | 1.68  |
| Voltage             | 220V – 50Hz |       |       |       |       |       |       |       |       |       |
| Holding current (A) | 00:45       | 00:58 | 0.95  | 0.95  | 1.3   | 1.5   | 02:15 | 1.5   | 02:15 | 02:15 |
| Inrush current (A)  | 0.63        | 0.89  | 01:12 | 01:37 | 1.85  | 02:34 | 3.4   | 02:34 | 3.4   | 3.4   |
| Voltage             | 24V – 50 Hz |       |       |       |       |       |       |       |       |       |
| Holding current (A) | 3.2         | 4.3   | 6.5   | 8.1   |       |       |       |       |       |       |
| Inrush current (A)  | 6           | 8     | 12    | 14    |       |       |       |       |       |       |
| Voltage             | 24V DC      |       |       |       |       |       |       |       |       |       |
| Holding current (A) | 2.2         | 3.5   | 4.5   | 6.5   |       |       |       |       |       |       |
| Inrush current (A)  | 4.1         | 4.1   | 6.6   | 13.8  |       |       |       |       |       |       |

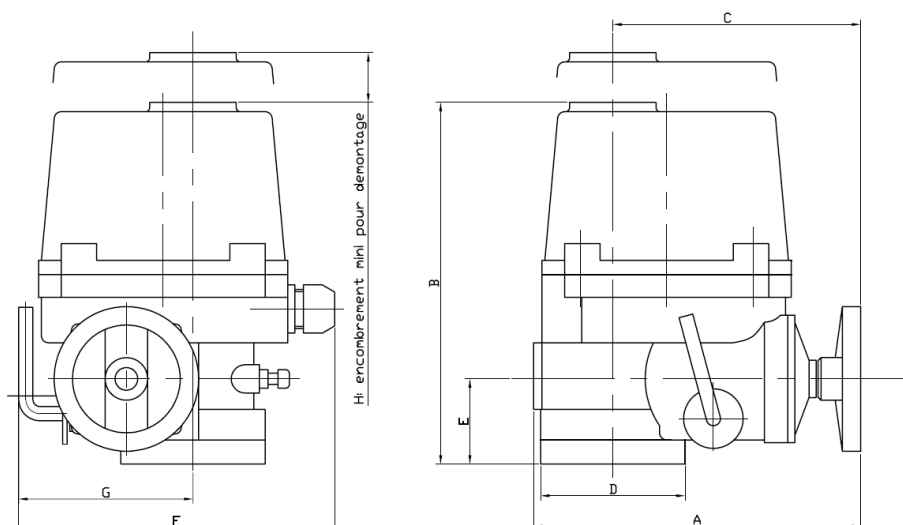
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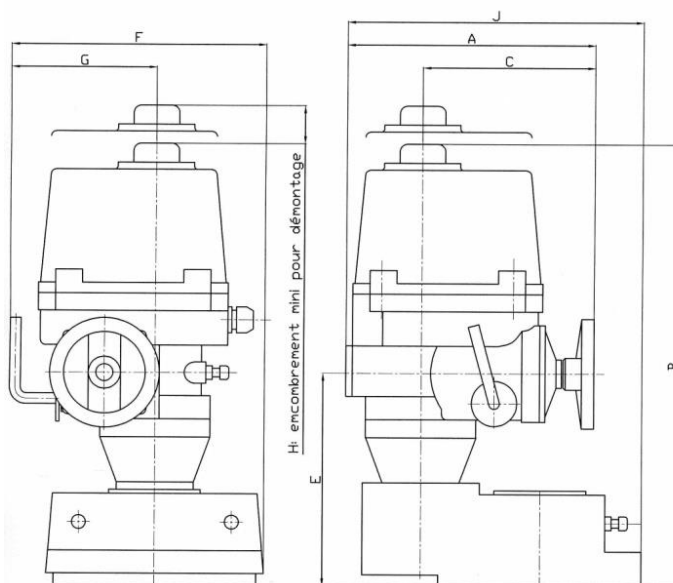
# NA / NA-X ELECTRIC ACTUATOR

## DIMENSIONS (mm)

### NA 06 to NA 100



### NA 150 to NA 250



| NA          | A   | B   | C   | D   | E   | F   | G   | H   |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 06-09       | 231 | 255 | 175 | 102 | 60  | 223 | 113 | 108 |
| 15          | 261 | 255 | 184 | 120 | 60  | 266 | 139 | 108 |
| 28-38       | 285 | 302 | 202 | 145 | 70  | 300 | 159 | 130 |
| 60-100      | 325 | 343 | 226 | 175 | 78  | 349 | 191 | 178 |
| 150-200-250 | 325 | 556 | 226 | -   | 273 | 388 | 191 | 178 |

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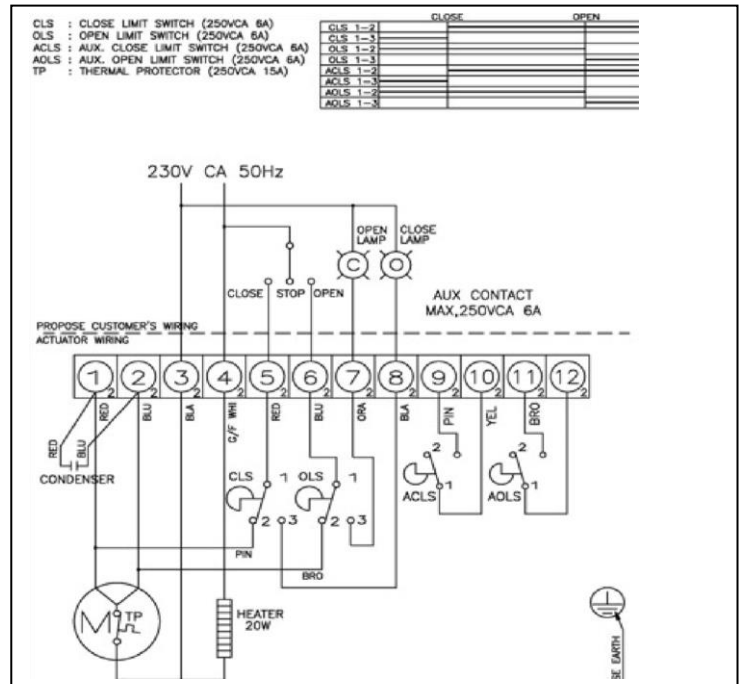
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# NA / NA-X ELECTRIC ACTUATOR

## WIRING DIAGRAM

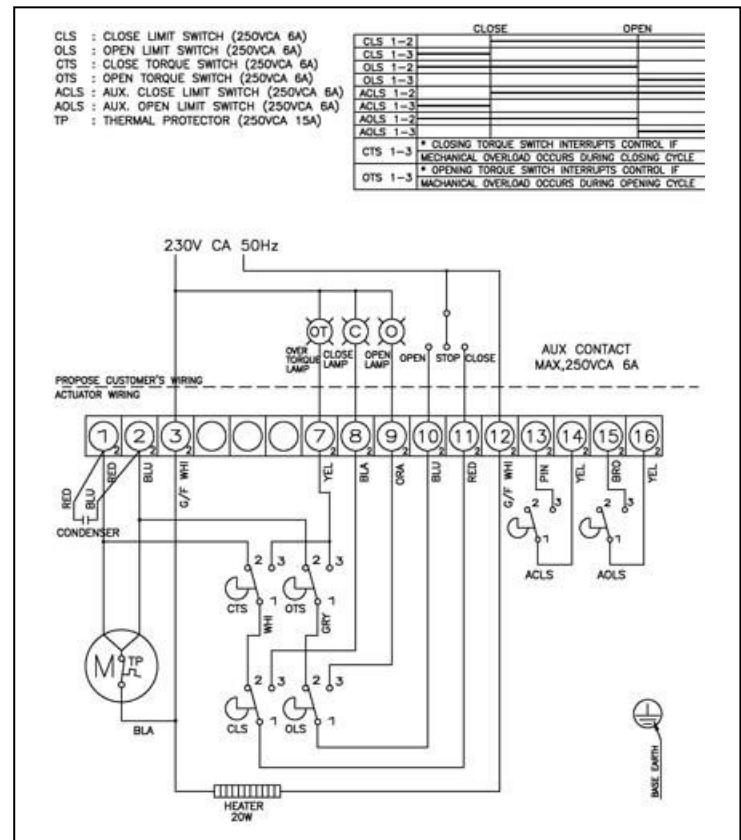
Wiring for 230V 50Hz voltage (NA06-NA09)

|    |                                      |
|----|--------------------------------------|
| 1  | Do not use                           |
| 2  | Do not use                           |
| 3  | Common                               |
| 4  | phase                                |
| 5  | Closing command                      |
| 6  | Opening command                      |
| 7  | Opening indicator light (suggestion) |
| 8  | Closing indicator light (suggestion) |
| 9  | Closing auxiliary                    |
| 10 | Closing auxiliary                    |
| 11 | Opening auxiliary                    |
| 12 | Opening auxiliary                    |



Wiring for 230V 50Hz voltage (other models)

|    |                                          |
|----|------------------------------------------|
| 1  | Do not use                               |
| 2  | Do not use                               |
| 3  | Common                                   |
| 7  | Overheating indicator light (suggestion) |
| 8  | Closing indicator light (suggestion)     |
| 9  | Opening indicator light (suggestion)     |
| 10 | Opening command                          |
| 11 | Closing command                          |
| 12 | phase                                    |
| 13 | Closing auxiliary                        |
| 14 | Closing auxiliary                        |
| 15 | Opening auxiliary                        |
| 16 | Opening auxiliary                        |



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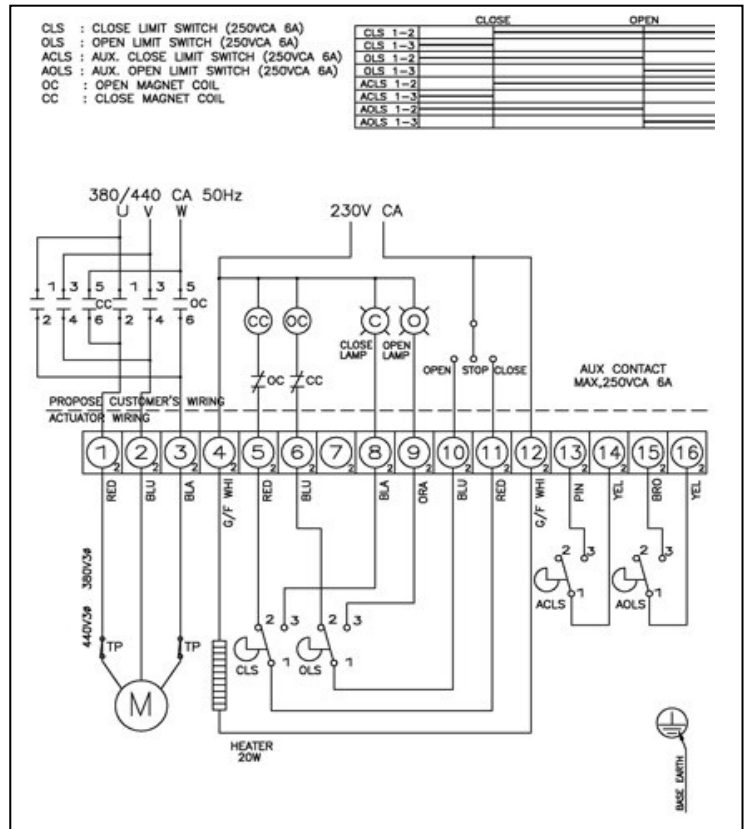
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# NA / NA-X ELECTRIC ACTUATOR

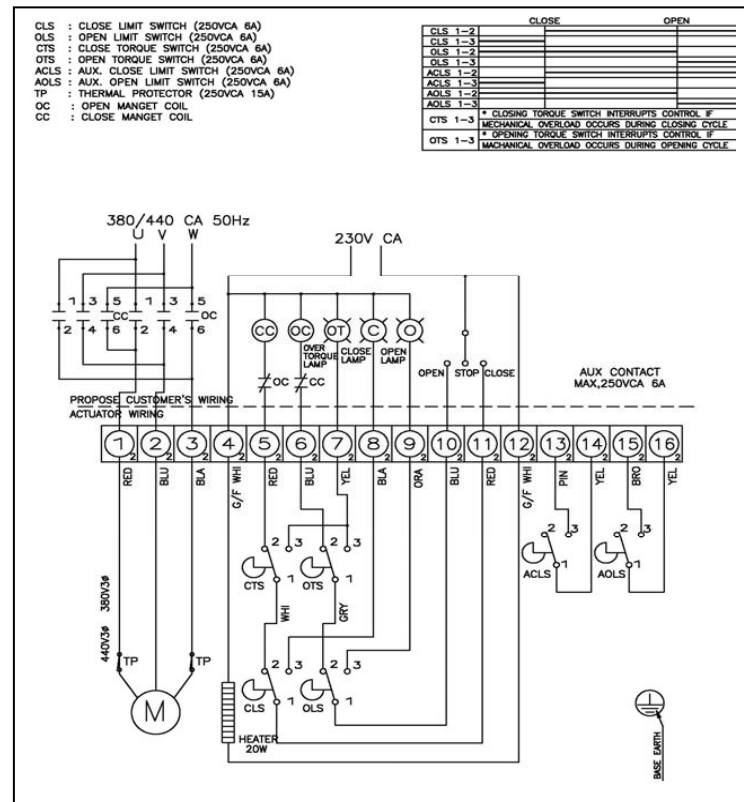
## Wiring for 380V 50Hz voltage (NA06-NA09)

|    |                                      |
|----|--------------------------------------|
| 1  | U phase                              |
| 2  | V phase                              |
| 3  | W phase                              |
| 4  | Heater power supply                  |
| 5  | Connected to the closing 11          |
| 6  | Connected to the opening 10          |
| 7  | Not used                             |
| 8  | Closing indicator light (suggestion) |
| 9  | Opening indicator light (suggestion) |
| 10 | Opening command                      |
| 11 | Closing command                      |
| 12 | Heater power supply                  |
| 13 | Closing auxiliary                    |
| 14 | Closing auxiliary                    |
| 15 | Opening auxiliary                    |
| 16 | Opening auxiliary                    |



## Wiring for 380V 50Hz voltage (other models)

|    |                                          |
|----|------------------------------------------|
| 1  | U phase                                  |
| 2  | V phase                                  |
| 3  | W phase                                  |
| 4  | Heater power supply                      |
| 5  | Connected to the closing 11              |
| 6  | Connected to the opening 10              |
| 7  | Overheating indicator light (suggestion) |
| 8  | Closing indicator light (suggestion)     |
| 9  | Opening indicator light (suggestion)     |
| 10 | Opening command                          |
| 11 | Closing command                          |
| 12 | Heater power supply                      |
| 13 | Closing auxiliary                        |
| 14 | Closing auxiliary                        |
| 15 | Opening auxiliary                        |
| 16 | Opening auxiliary                        |



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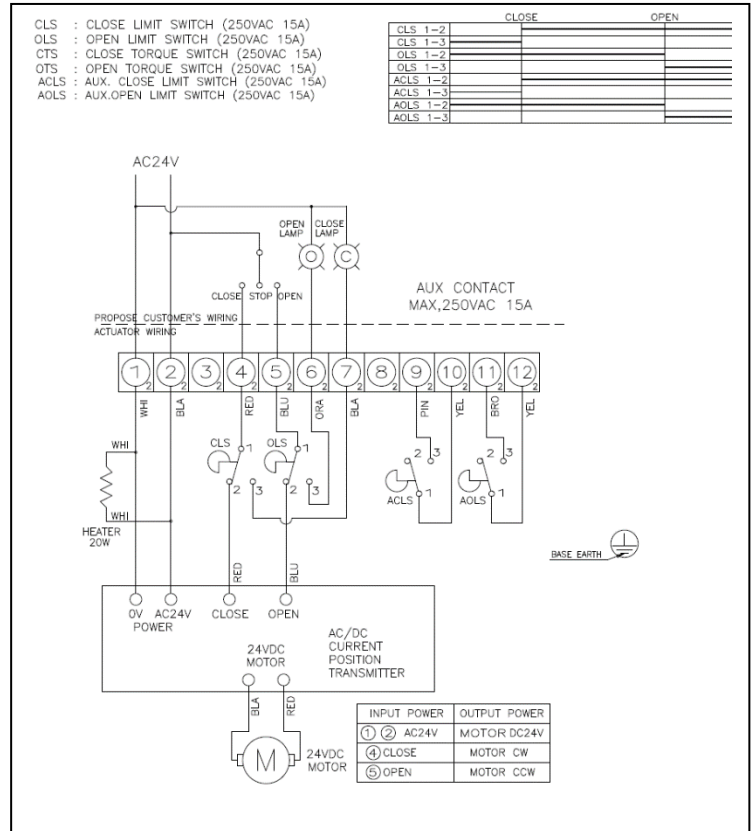
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# NA / NA-X ELECTRIC ACTUATOR

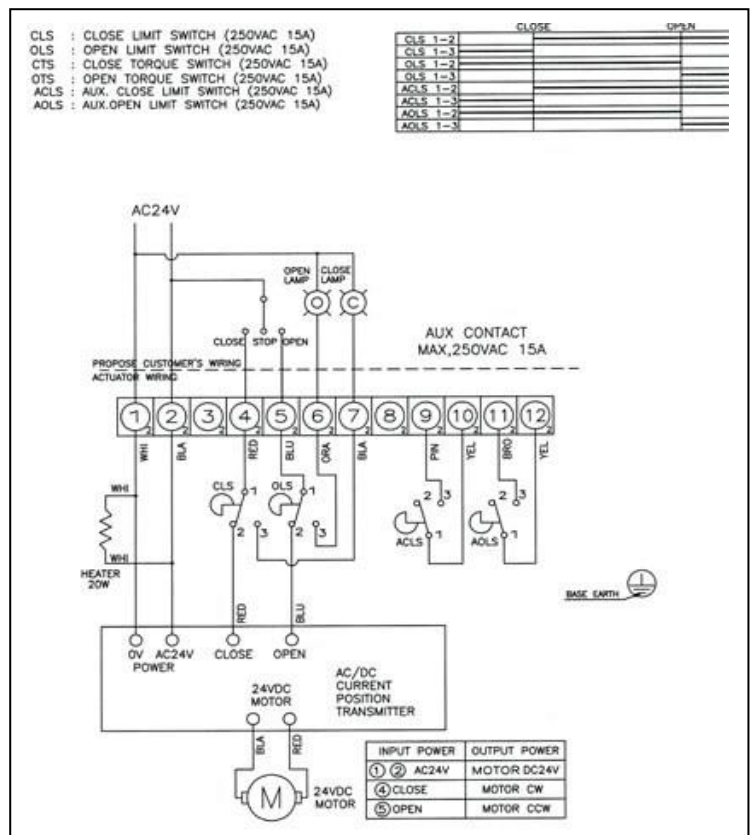
## Wiring for 24V 50Hz voltage (NA06-NA09)

|    |                                      |
|----|--------------------------------------|
| 1  | Do not use                           |
| 2  | Do not use                           |
| 3  | Common                               |
| 4  | phase                                |
| 5  | Closing command                      |
| 6  | Opening command                      |
| 7  | Opening indicator light (suggestion) |
| 8  | Closing indicator light (suggestion) |
| 9  | Closing auxiliary                    |
| 10 | Closing auxiliary                    |
| 11 | Opening auxiliary                    |
| 12 | Opening auxiliary                    |



## Wiring for 24V 50Hz voltage (other models)

|    |                                      |
|----|--------------------------------------|
| 1  | Common                               |
| 2  | phase                                |
| 3  | Not used                             |
| 4  | Closing command                      |
| 5  | Opening command                      |
| 6  | Opening indicator light (suggestion) |
| 7  | Closing indicator light (suggestion) |
| 8  | Not used                             |
| 9  | Closing auxiliary                    |
| 10 | Closing auxiliary                    |
| 11 | Opening auxiliary                    |
| 12 | Opening auxiliary                    |



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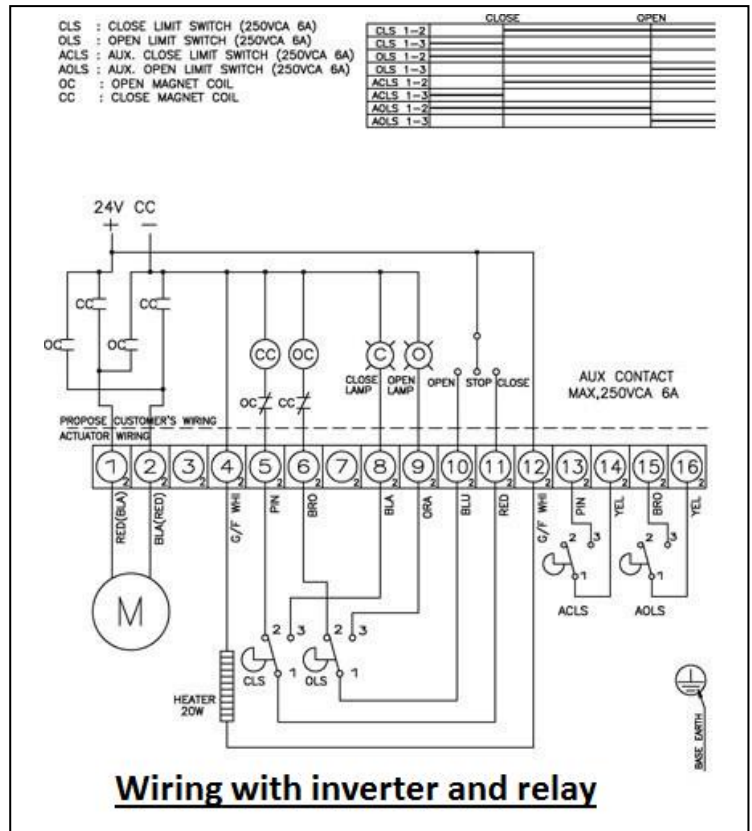
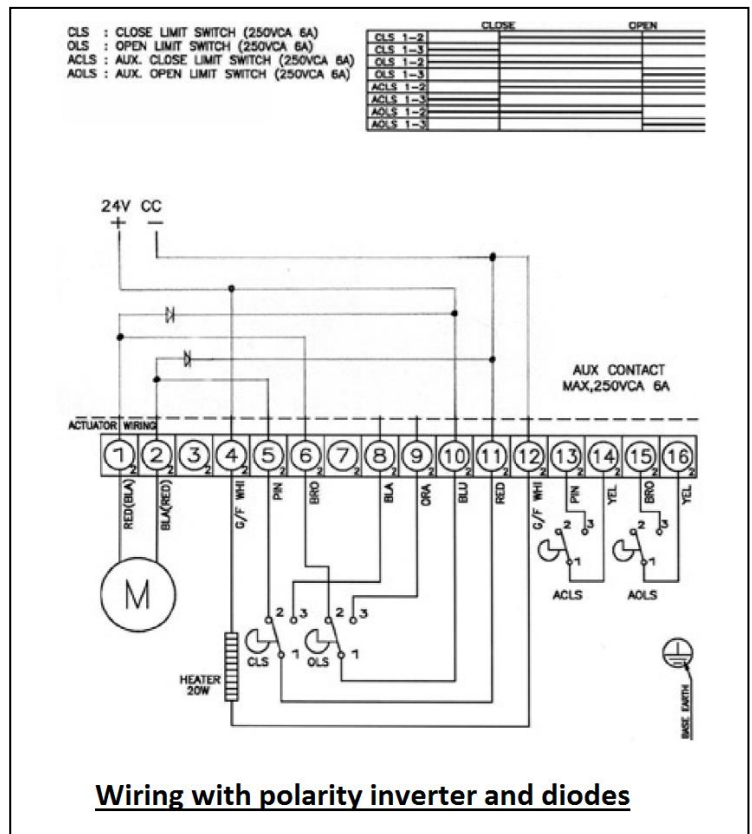
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# NA / NA-X ELECTRIC ACTUATOR

## Proposals for 24Vcc (NA06-NA09) wiring

|    |                                     |
|----|-------------------------------------|
| 1  | Connected to terminal 10 with diode |
| 2  | Connected to terminal 11 with diode |
| 3  | Not used                            |
| 4  | Heater power supply                 |
| 5  | Connected to terminal 2             |
| 6  | Connected to terminal 1             |
| 7  | Not used                            |
| 8  | Powered closing switch              |
| 9  | Powered opening switch              |
| 10 | + / - Opening command               |
| 11 | + / - Closing command               |
| 12 | Heater power supply                 |
| 13 | Closing auxiliary                   |
| 14 | Closing auxiliary                   |
| 15 | Opening auxiliary                   |
| 16 | Opening auxiliary                   |



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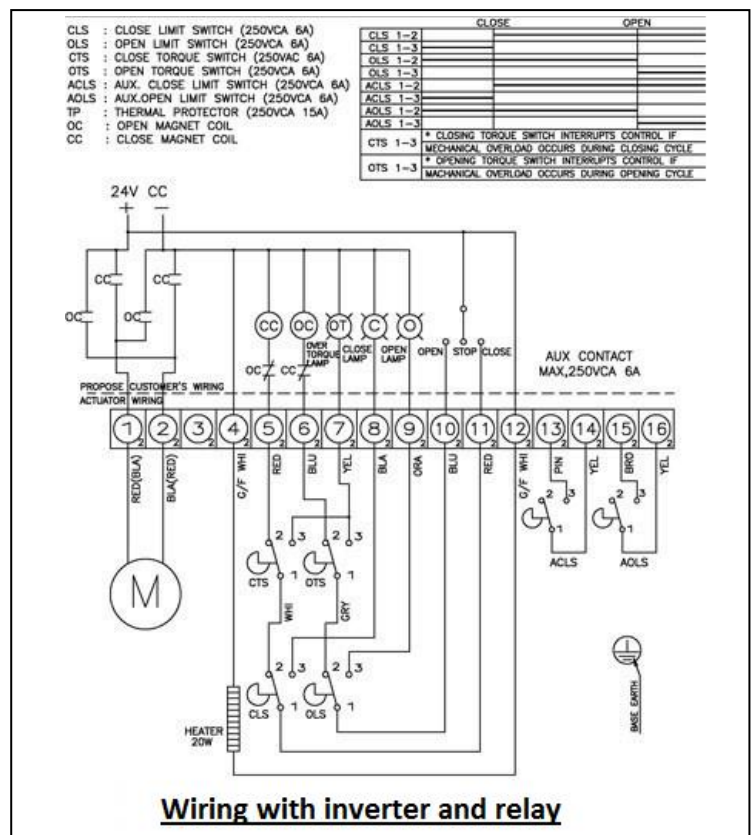
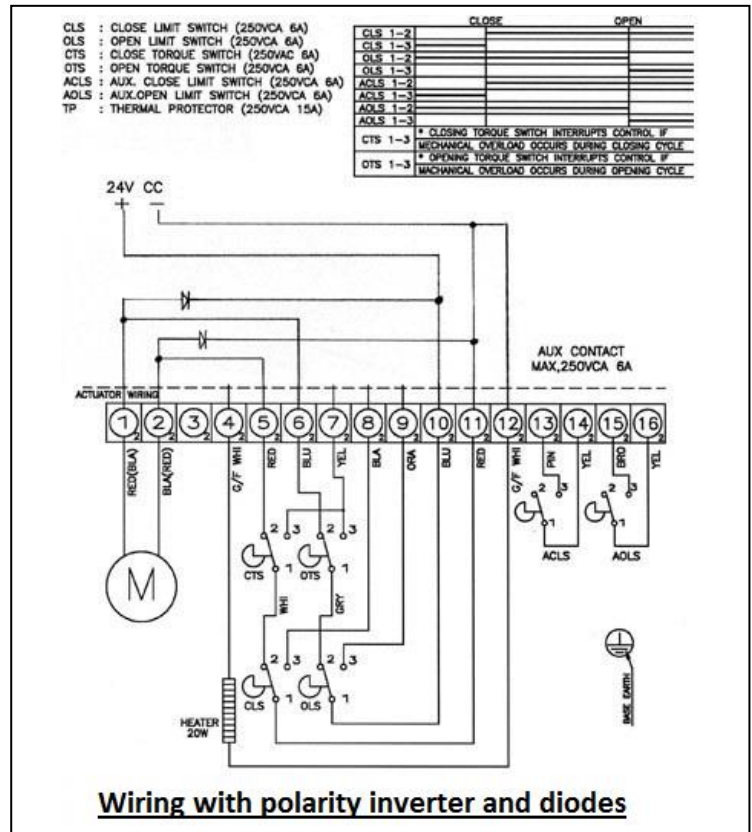
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# NA / NA-X ELECTRIC ACTUATOR

## Proposition for 24V DC wiring (other models)

|    |                                     |
|----|-------------------------------------|
| 1  | Connected to terminal 10 with diode |
| 2  | Connected to terminal 11 with diode |
| 3  | Not used                            |
| 4  | Heater power supply                 |
| 5  | Connected to terminal 2             |
| 6  | Connected to terminal 1             |
| 7  | Power-supplied over-torque switch   |
| 8  | Powered closing switch              |
| 9  | Powered opening switch              |
| 10 | + / - Opening command               |
| 11 | + / - Closing command               |
| 12 | Heater power supply                 |
| 13 | Closing auxiliary                   |
| 14 | Closing auxiliary                   |
| 15 | Opening auxiliary                   |
| 16 | Opening auxiliary                   |



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# NA / NA-X ELECTRIC ACTUATOR

## OPTIONS

|   |                                                                     |
|---|---------------------------------------------------------------------|
| 1 | NA PIU: version with feedback potentiometer                         |
| 2 | NA CPT: version with position transmitter 4-20 mA                   |
| 3 | NA PCU: version with adjustment card 0-10V, 2-10V, 2-20 mA, 4-20 mA |
| 4 | NA LCU: version with local control                                  |
| 5 | NA RBP: version with in-built fail safe/security                    |
| 6 | Anti-seismic test                                                   |
| 7 | Low temperature version -40                                         |
| 8 | IP 68 version                                                       |
| 9 | 120°, 135°, 180°, 270° rotation angles                              |

## OPTION LCU : LOCAL CONTROL UNIT

The LCU option allows the actuator to be operated through two different modes. The first one is the standard remote control. The second is the local control using the switch button plug on the actuator. This option is used full for maintenance and periodic inspection.

## AVAILABLE MODELS

**NA09 LCU** : 90 Nm

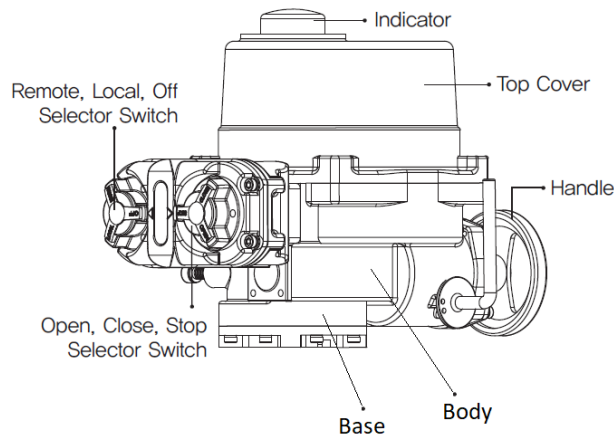
**NA15 LCU** : 150 Nm

**NA28 LCU** : 280 Nm

**Supply voltages** : 230 Vac, 400 Vac

## SPECIFICATION

|   |                                                  |
|---|--------------------------------------------------|
| 1 | IP code : IP67                                   |
| 2 | Housing : aluminium                              |
| 3 | Remote, Off, local selector switch               |
| 4 | Open, stop, close selector switch                |
| 5 | Remote, local, open, over torque, close LED Lamp |
| 6 | Pad lockable                                     |

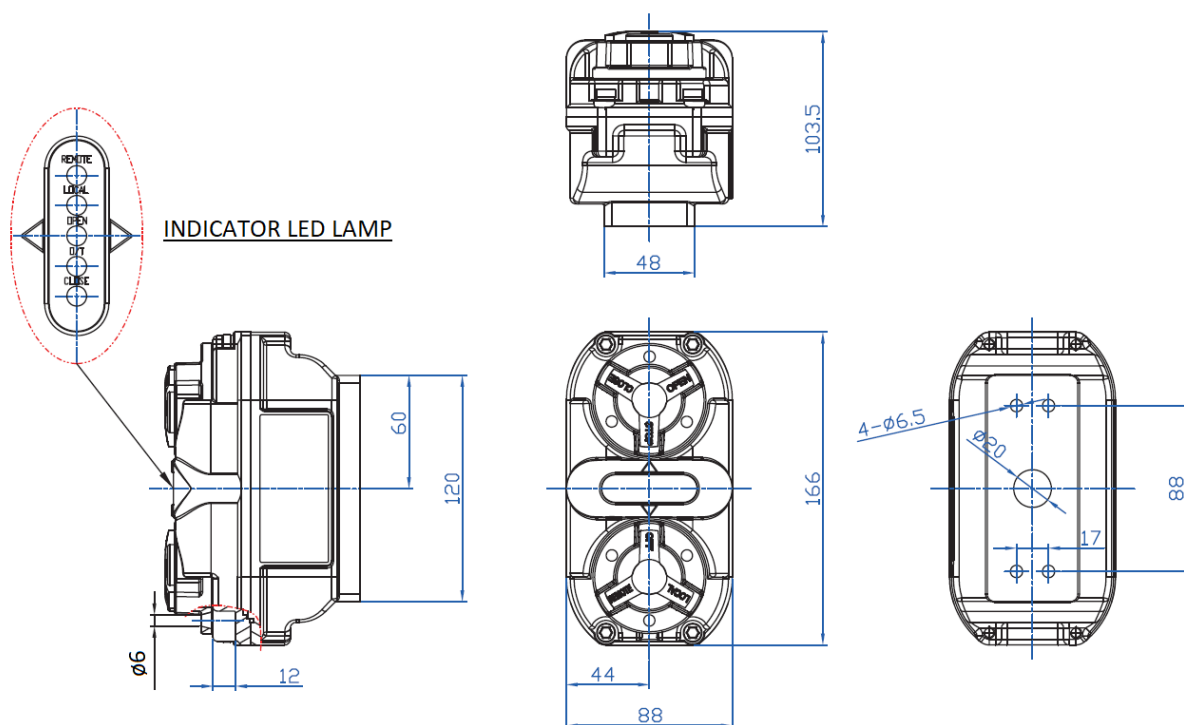


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# NA / NA-X ELECTRIC ACTUATOR

## DIMENSIONS (mm)

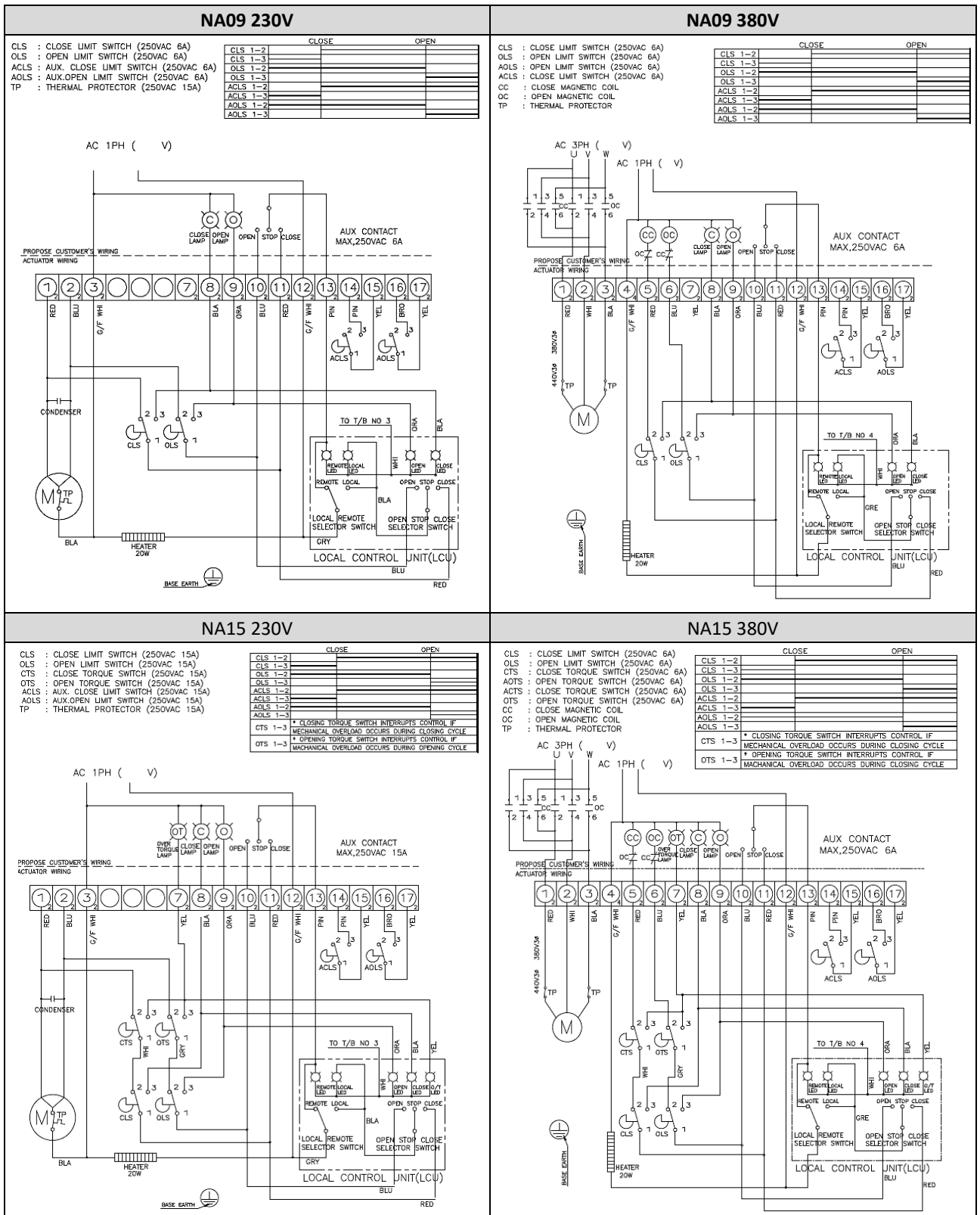


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# NA / NA-X ELECTRIC ACTUATOR

## ELECTRICAL DIAGRAM NA LCU



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# NA / NA-X ELECTRIC ACTUATOR

## OPTION RBP : FAIL SAFE TYPE

The RBP option adds a safety function to the NA actuator: in normal operation, the rotations are ensured by the power supply of the grid. In safety mode (power cut-off), the actuator automatically operates (opening or closing the valve) to switch the valve to the safe position. The power is supplied by a battery installed in the side housing.

## AVAILABLES MODELS

**NA09 RBP** : 90 Nm

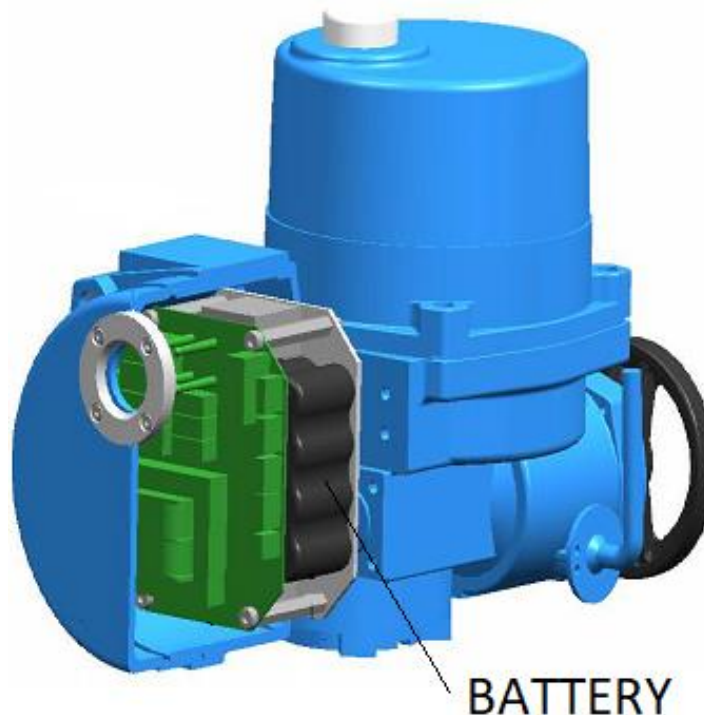
**NA15 RBP** : 150 Nm

**Supply voltage** : 230 Vac



## SPECIFICATION

|   |                                                                                                                                                                                                                                     |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <u>IP rating</u> : IP67                                                                                                                                                                                                             |
| 2 | <u>Housing</u> : aluminium                                                                                                                                                                                                          |
| 3 | Return to position due to lack of power                                                                                                                                                                                             |
| 4 | <u>Power supply</u> : 230V - 50 / 60Hz                                                                                                                                                                                              |
| 5 | Built-in battery safety unit                                                                                                                                                                                                        |
| 6 | <u>Battery size</u> : 89 x 111 x 44<br><u>Charging volt</u> : DC 32V 1A<br><u>Charging time</u> : 3 heures<br><u>Battery type</u> : Ni-Cd 1,2V 20EA<br><u>Emergency (time)</u> : 15 minutes (Max)<br><u>Battery weight</u> : 1,1 kg |



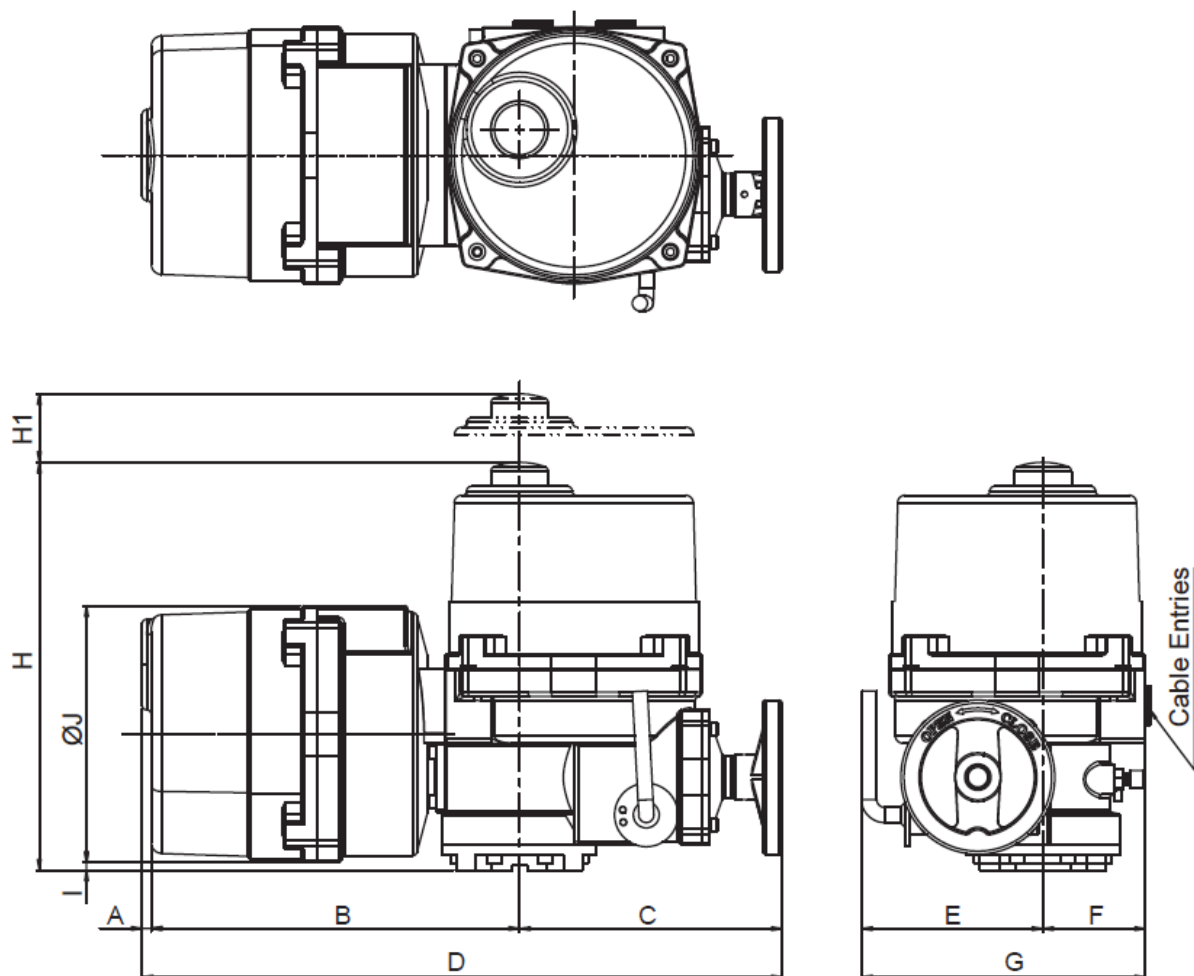
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# NA / NA-X ELECTRIC ACTUATOR

## DIMENSIONS (mm)



| Rep   | A | B   | C   | D   | E   | F  | G   | H   | H1  | ØJ  |
|-------|---|-----|-----|-----|-----|----|-----|-----|-----|-----|
| NA 09 | 6 | 244 | 174 | 424 | 120 | 68 | 188 | 270 | 108 | 170 |
| NA 15 | 6 | 265 | 184 | 455 | 139 | 85 | 224 | 274 | 108 | 170 |

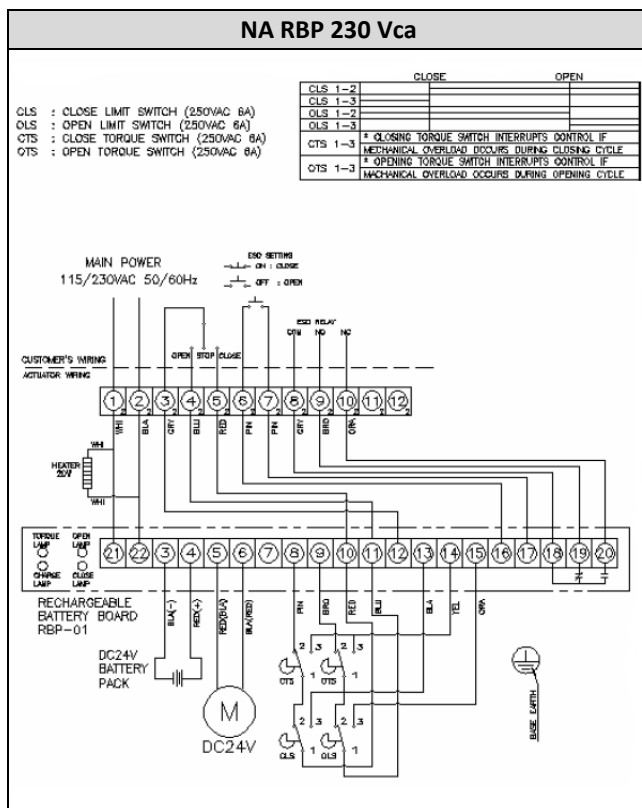
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# NA / NA-X ELECTRIC ACTUATOR

## SCHEMA ELECTRIQUE NA RBP



Information given as an indication only, and subject to possible modifications

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