

505-507 VALVES WITH NA ELECTRIC ACTUATOR

FEATURES

The 505+NA and 507+NA cast iron ball valves are dedicated to the automatic opening/shut-off of pipes carrying low pressure unloaded common fluids. The 505-507 full bore split body ball valve has the EC 2014/68 certification. The 505 valve complies with the NF 29323 face-to-face standards and the 507 valve complies with the DIN 3202 F4/F5 face-to-face standards. The ISO 5211 pad allows a direct mounting of the NA actuator. It is perfectly suitable for an indoor or outdoor industrial use.

AVAILABLE MODELS

505 : Face to face according to NF 29-323 F18. Size 50 to 150.

507 : Face to face according to DIN 3202 F4/F5 for DN 50 to 200.

(DN 125 and 150 that are not included in this standard with their threaded bolt hole)
Flanged connections RF PN10/16.

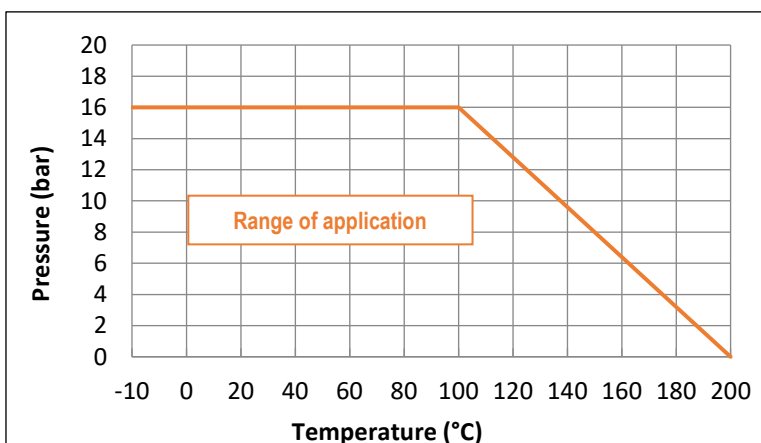
Supply voltages : 24V ac-dc, 230V ac, tri 400V.



IP
67

LIMITS OF USE

Fluid pressure : PS	16 bar (20°C)
Fluid temperature : WT°	-10°C / +200°C
Prohibited use	Steam, compressed air and gases
Ambiant temperature	- 20°C / + 70°C
Service factor	S2 – 70%



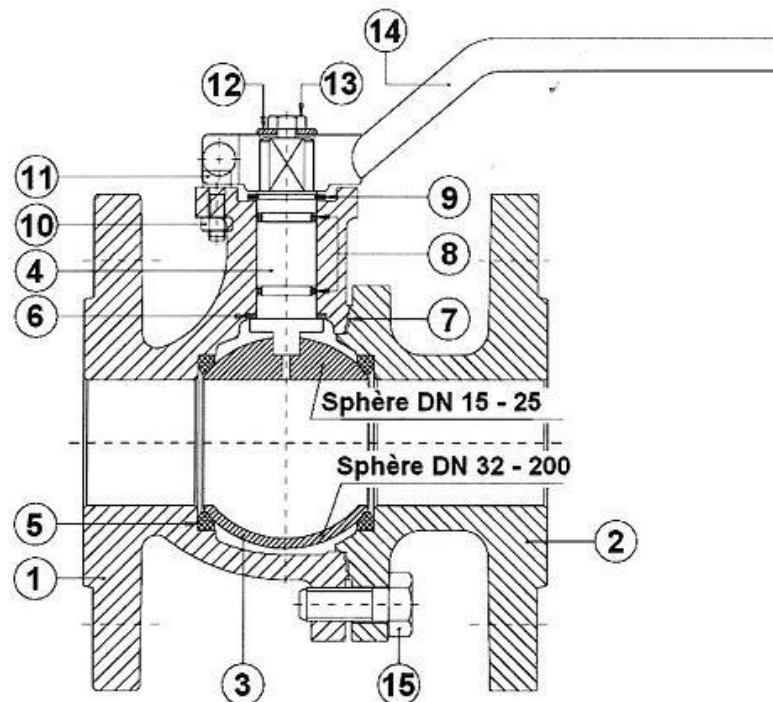
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		Date	10/2023

505-507 VALVES WITH NA ELECTRIC ACTUATOR

DIRECTIVES AND MANUFACTURING STANDARDS

OBJET	Standard	OBJET	Standard
Pressure Equipment Directive 2014/68/EC	DN 15 and 20 : not subject	Final test	EN 12266-1
	DN 25 to 200 : category I	Face-to-face dimension 505	NF 29-323
Conception	DIN 3357	Face-to-face dimension 507	EN 558-1 series 27
Size	DIN 3840	Marking code	EN 19
Flanges dimension	EN 1092-2	Motorisation connection	ISO 5211



CONSTRUCTION

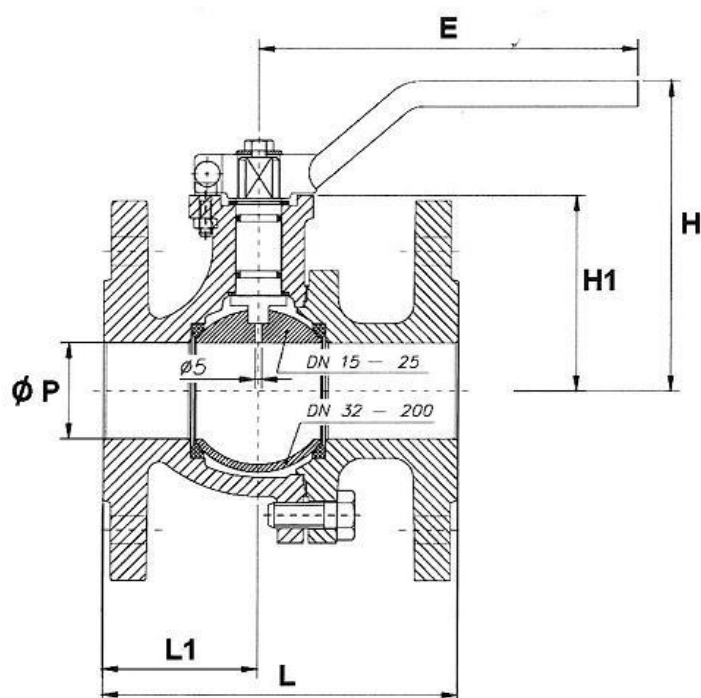
No.	Name	Material	No.	Name	Material
1	Body	EN GJL-250 Cast Iron	8	O ring	FKM
2	End	EN GJL-250 Cast Iron	9	Washer	DIN 471 steel
3	Ball DN 15-25	SS 303 Stainless steel	10	Nut	DIN 934-8 steel
3	Ball DN 32-200	SS 304 Stainless steel	11	Screw	DIN 912- 8.8 steel
4	Stem	SS 304 Stainless steel	12	Washer	Zinc plated steel
5	Seat	PTFE	13	Screw	DIN 935 5.6
6	Friction ring	PTFE	14	Handle	Steel
7	Body gasket	PTFE	15	Screw	DIN 933 5.6

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DIMENSIONS (mm)



DN	15	20	25	32	40	50	65	80	100	125	150	200
Ø P	13	17	24	31	38	50	65	80	100	125	150	200
L (505)	/	/	/	/	136	142	154	160	172	186	200	/
L (507)	115	120	125	130	140	150	170	180	190	200	210	400
L1	49	55.5	51.5	53	61	62	81.5	79	94	120.5	155	190
H	92	95.5	102.2	114.7	119	127	141	151.5	176.5	208	254.2	293.5
H1	48.5	53	59.5	72	77	85	98	108.5	134	165	190	229
E	170	170	170	170	302.5	302.5	224	335	350	350	500	500
Weight (kg)	2.12	2.72	3.62	5.32	6.90	9.00	11.7	14.7	20.2	33.8	49.8	81.8

FLOW-RATE COEFFICIENT Kv (m³/h)

DN	15	20	25	32	40	50	65	80	100	125	150	200
Kv	37.4	74.8	105	176	223	416	660	1200	1980	3600	5040	10890

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505-507 VALVES WITH NA ELECTRIC ACTUATOR

NA ELECTRICAL MOTORISATION

Suggested standard NA actuation under the following conditions:

- Electric actuator with an IP 67 epoxy coated aluminium enclosure and steel gears,
- A minimum 1.3 safety factor compared with the valve nominal torque rating,
- A maximum pressure differential up/downstream of 10 bar ($=\Delta P$).

Electric actuator mounted with stainless steel bracket and coupler according to the EN 15081 standard.

DN	Actuator	Power (W)	Time (s)*	
15	Refer to 505-507 + SA electric actuator			
20				
25				
32				
40				
50	NA 06	15 W	17 s	Standard equipment of the electric actuator 2 adjustable limit switches 2 dry auxiliaries Anti-condensation heater 20 W Position visual indicator Thermal protection of the motor (NA 06 and NA 09) Torque limiter (NA15 to NA60) Electrical connection : 2 x M20 x 1,5 glands Manual override by handwheel.
65	NA 09	25 W	17 s	
80	NA 15	40 W	20 s	
100	NA 28	40 W	20 s	
125	NA 28	40 W	20 s	
150	NA 38	90 W	24 s	
200	NA 60	90 W	29 s	

For any other operating conditions, please contact us.

* indicative time for actuator running empty

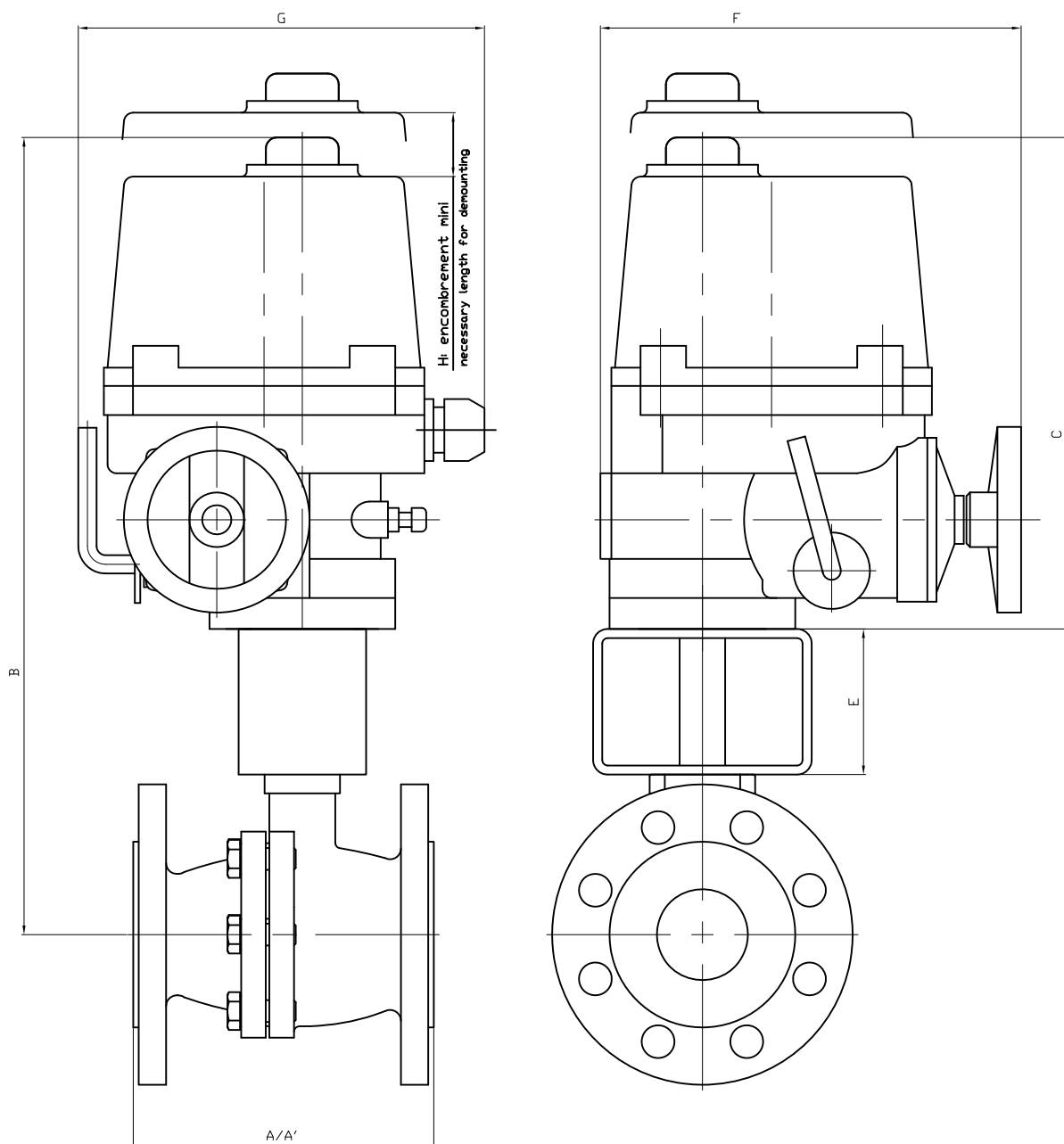
MOTORISATION OPTIONS

There are many options for which you are invited to contact our sales service:

1	2	3
NA LCU : Local control unit electric actuator	NA PCU : 4-20mA ou 0-10V Proportional control unit electric actuator	NA RBP : Fail safe / security electric actuator
		
4	actuator dimensioned for an upstream / downstream pressure difference ΔP greater than 10 bar	
5	NA actuator with override by handwheel	

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DN	50	65	80	100	125	150	200
TYPE	NA06	NA09	NA15	NA28	NA28	NA38	NA60
A<505>	142	154	160	172	186	200	/
A'<507>	150	170	180	190	200	210	400
B	400	413	423,5	469	547	572	652
C	255	255	255	302	302	302	343
E	60	60	60	80	80	80	80
F	231	231	261	285	285	285	325
G	223	223	266	300	300	300	349
H	108	108	108	130	130	130	178

Informations données à titre indicatif et sous réserve de modifications éventuelles

Ech: /	Date :07/03/2011	Dessiné par : E.D.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 505-507 + SERVOMOTEURS NA				Matière :		
				Poids (Kg) :		
				Traitement : SANS		
				45, Rue du Ruisseau		
				38297 SAINT QUENTIN FALLAVIER		
				Plan n° Ens 1088		

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

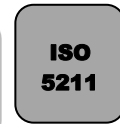
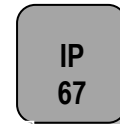
Supply voltages: 230 Vac, 400 Vac, 24 Vac, 24 Vdc



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

Motor protection	Thermal	Anti-condensation	20 W heater
Limit switches	2 adjustable switches	NA electrical connection	2 x C.G. M20x1.5
Auxiliary switches	2 adjustable dry switches	NA-X electrical connection	2 x C.G. M20x1.5 ATEX (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						

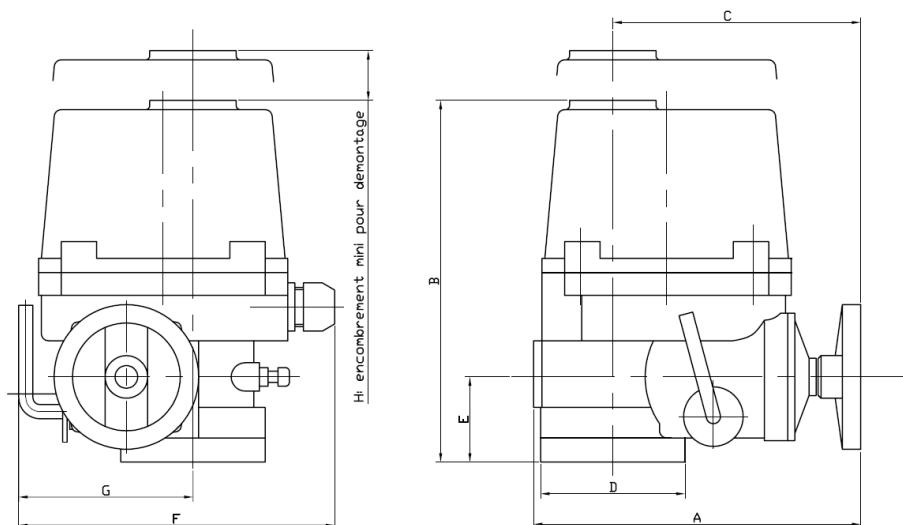
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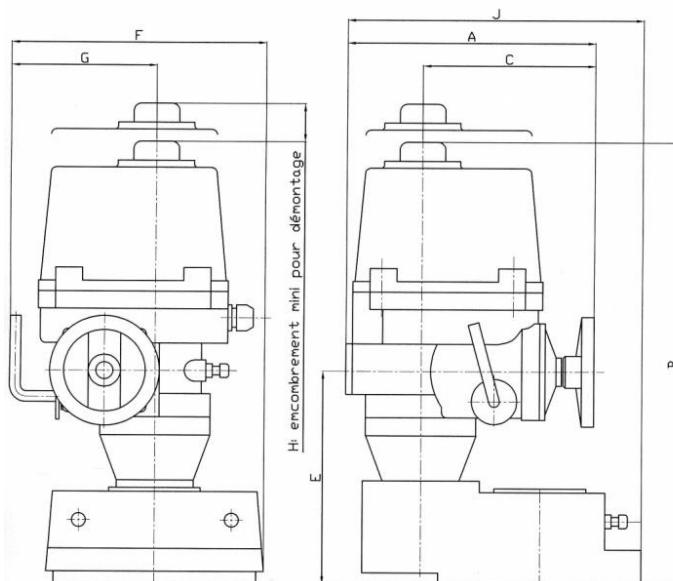
NA / NA-X ELECTRIC ACTUATOR

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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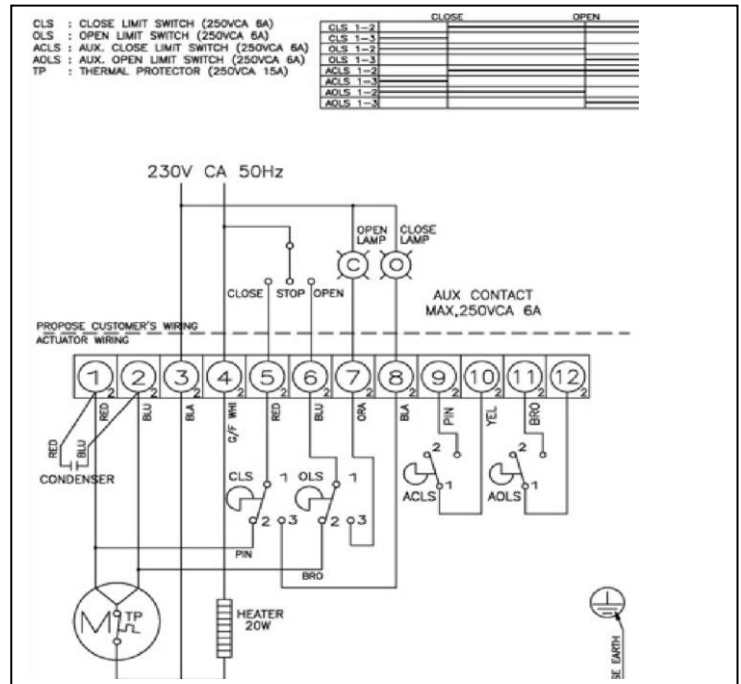
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NA / NA-X ELECTRIC ACTUATOR

WIRING DIAGRAM

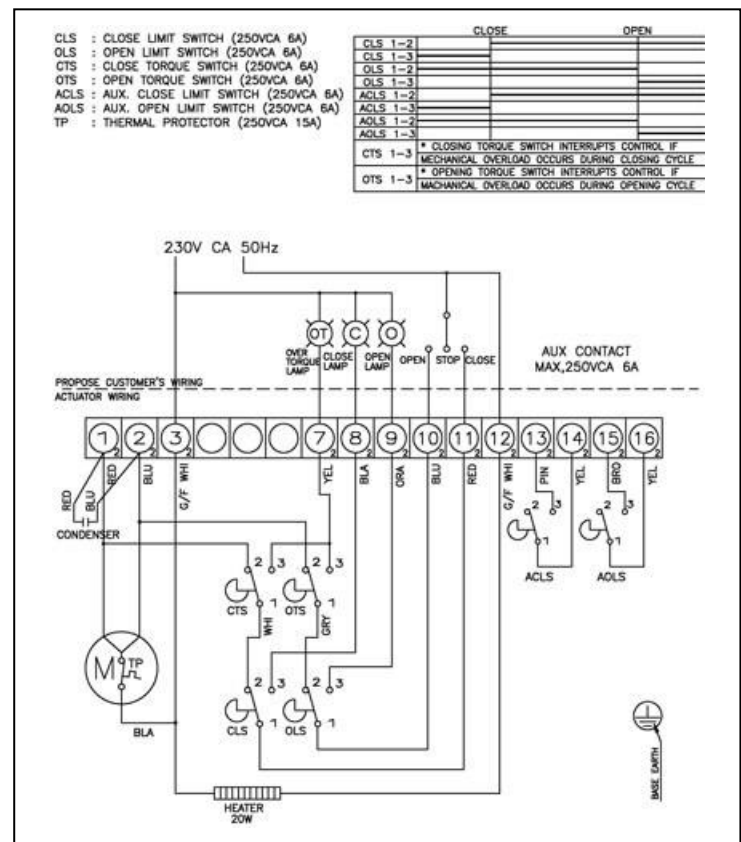
Wiring for 230V 50Hz voltage (NA06-NA09)

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



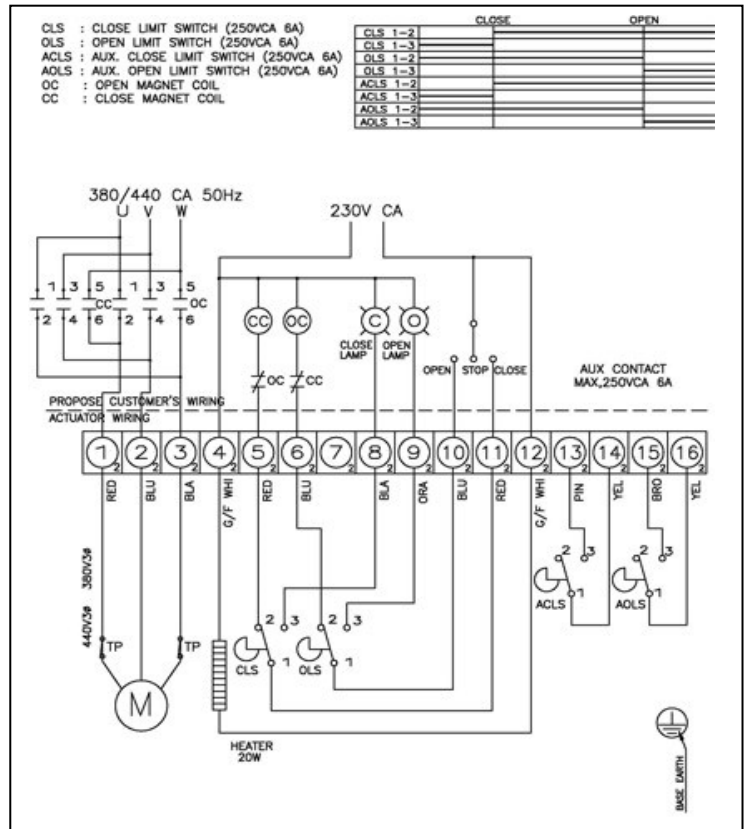
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NA / NA-X ELECTRIC ACTUATOR

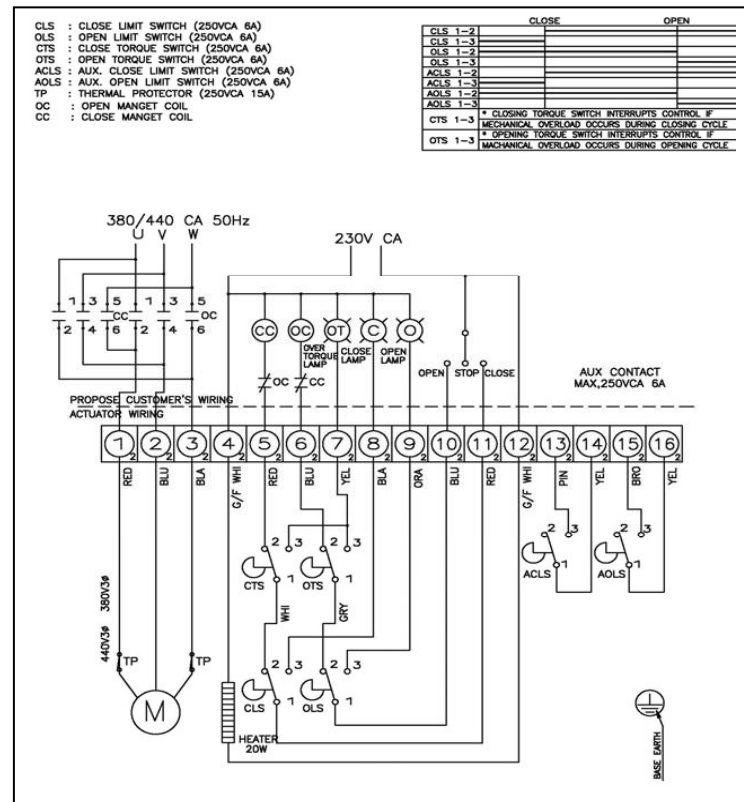
Wiring for 380V 50Hz voltage (NA06-NA09)

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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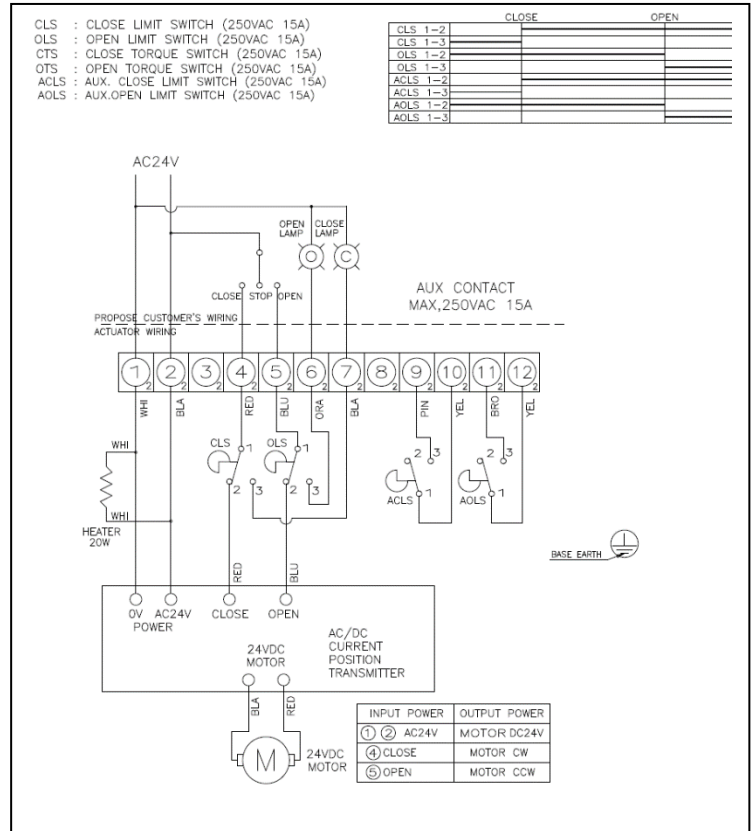
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NA / NA-X ELECTRIC ACTUATOR

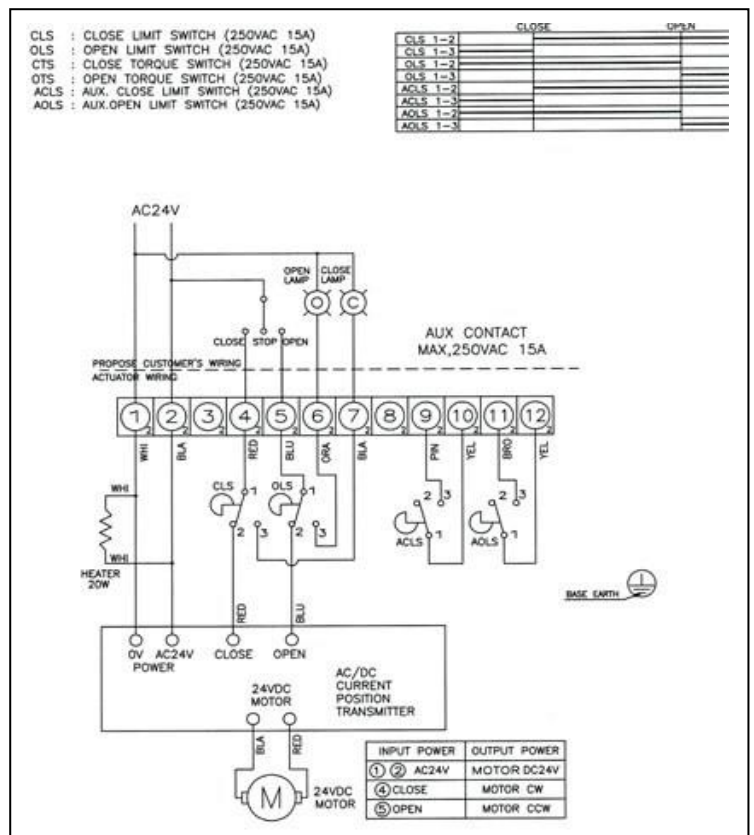
Wiring for 24V 50Hz voltage (NA06-NA09)

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



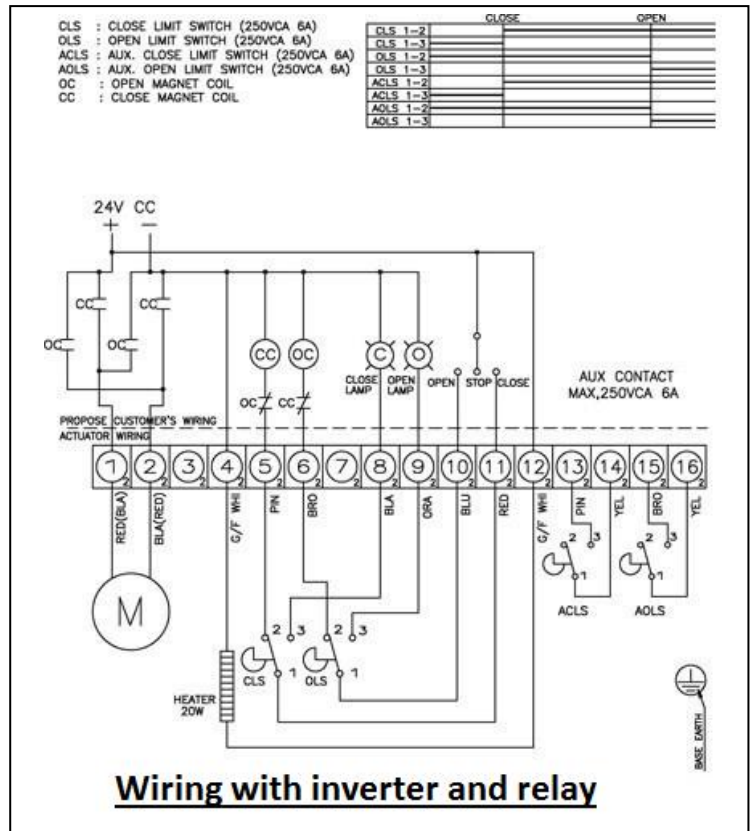
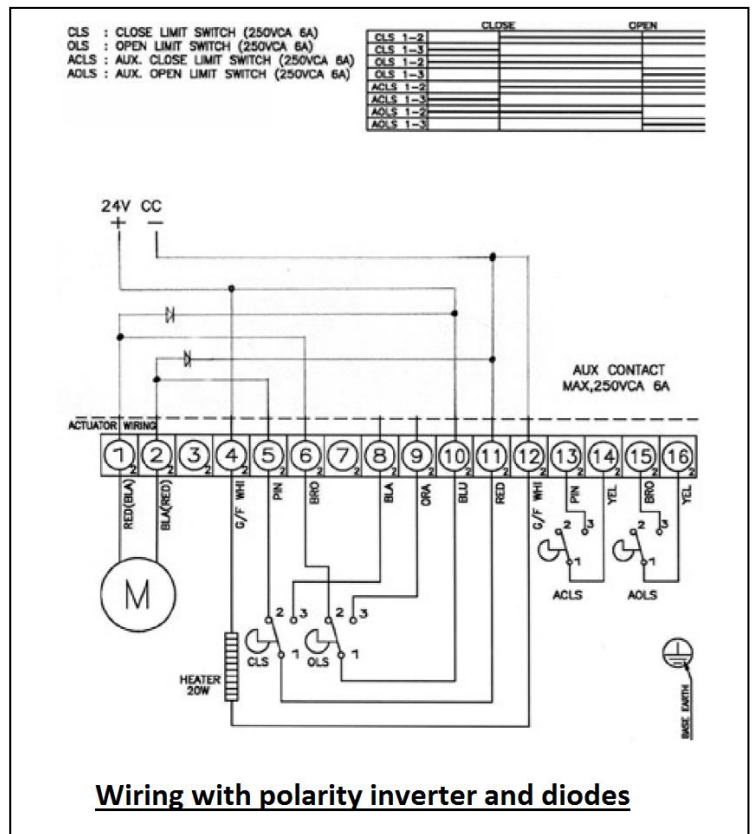
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NA / NA-X ELECTRIC ACTUATOR

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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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 use full for maintenance and periodic inspection.

AVAILABLE MODELS

NA09 LCU : 90 Nm

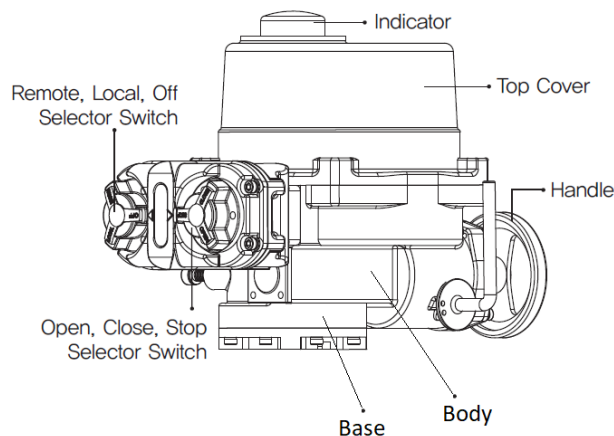
NA15 LCU : 150 Nm

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

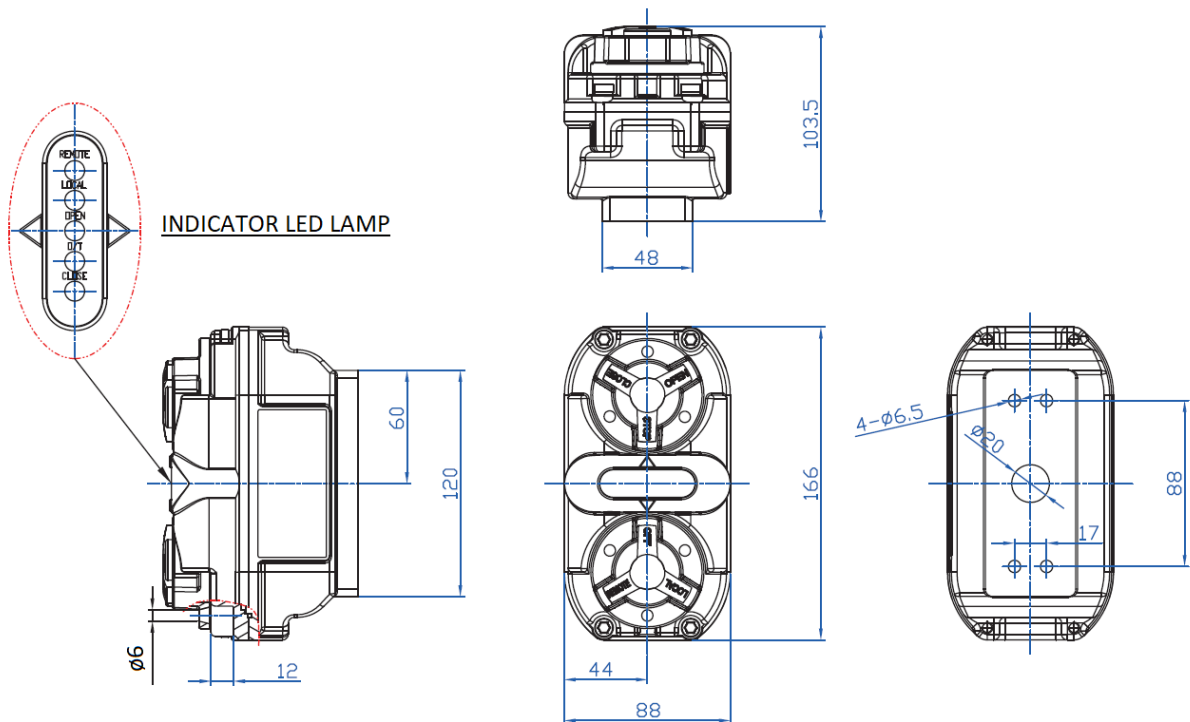


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NA / NA-X ELECTRIC ACTUATOR

DIMENSIONS (mm)

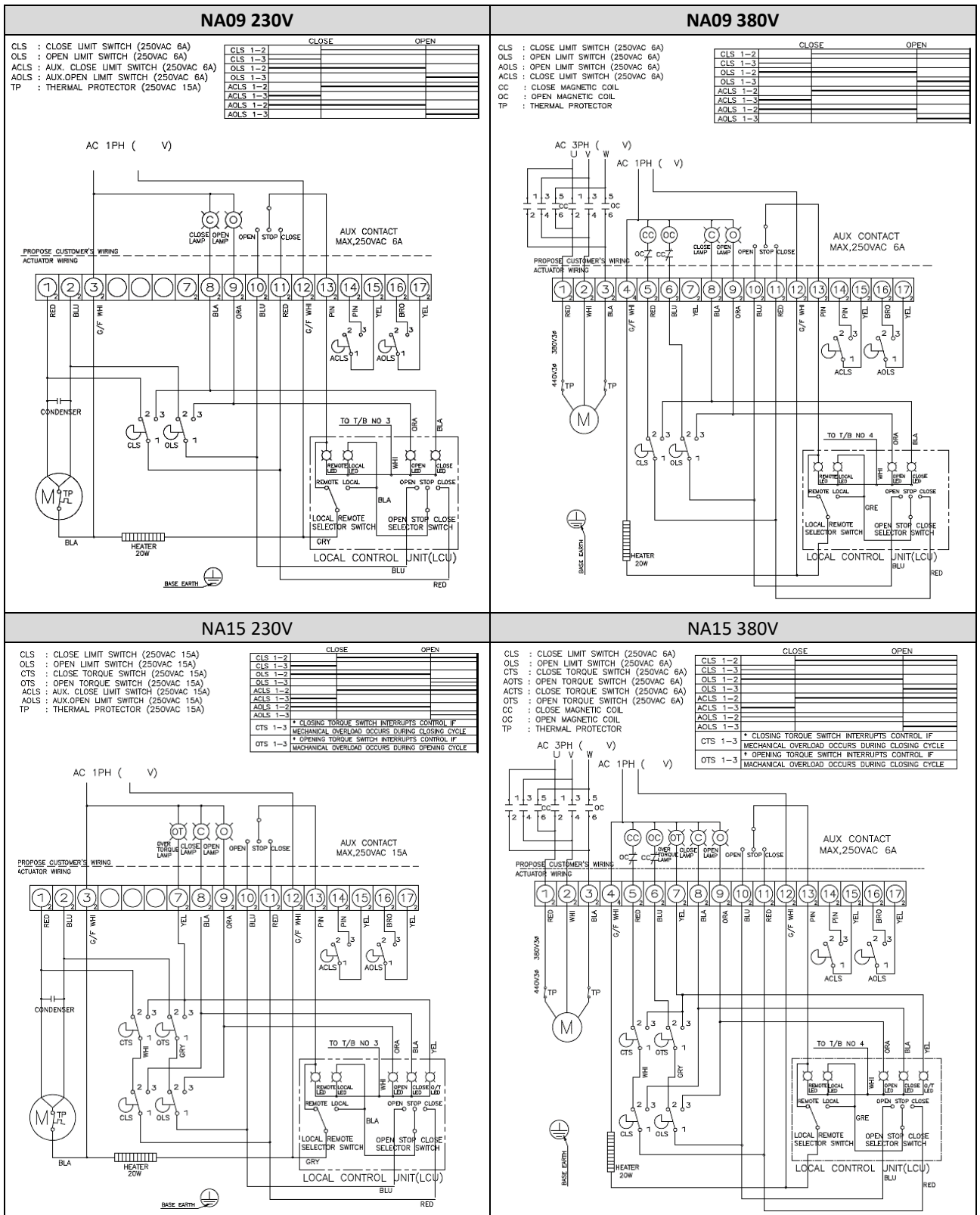


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NA / NA-X ELECTRIC ACTUATOR

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

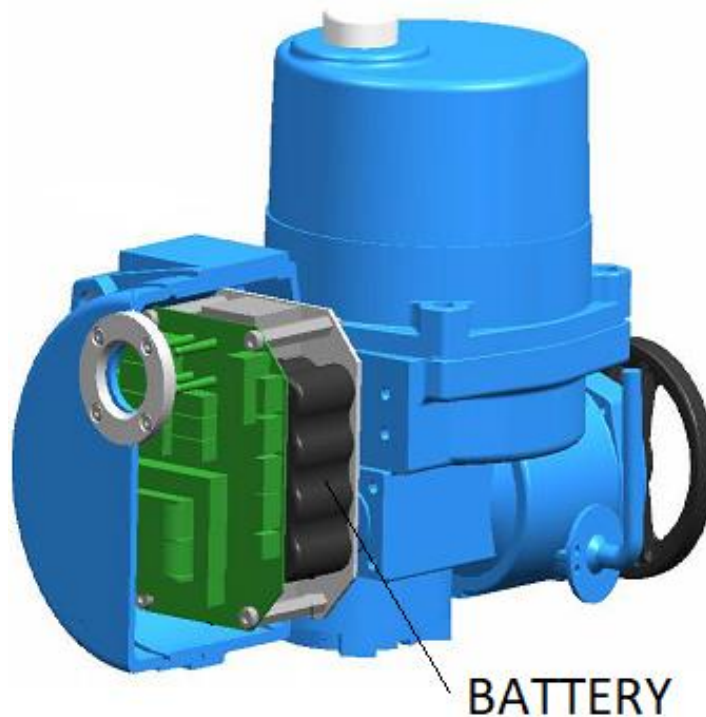
NA15 RBP : 150 Nm

Supply voltage : 230 Vac



SPECIFICATION

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

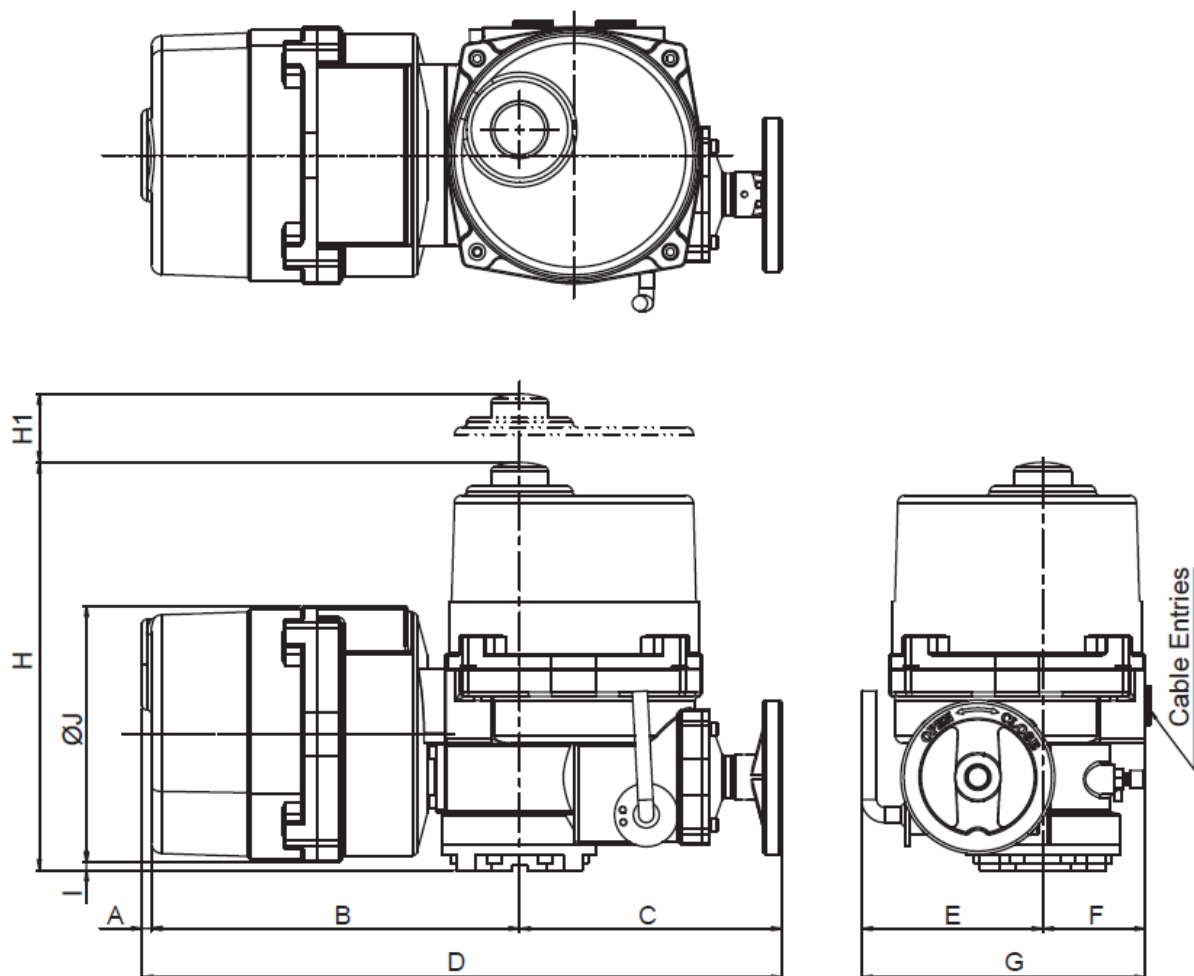


Information given as an indication only, and subject to possible modifications

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NA / NA-X ELECTRIC ACTUATOR

DIMENSIONS (mm)



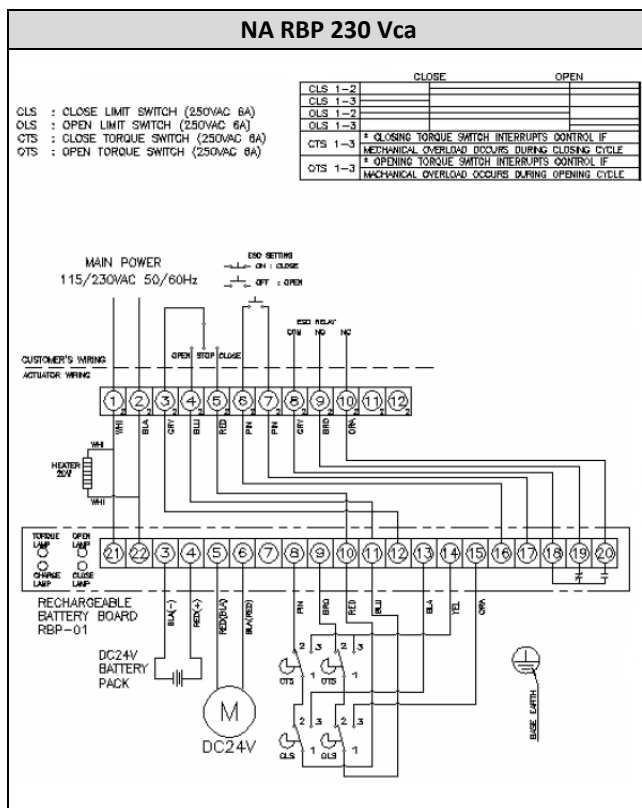
Rep	A	B	C	D	E	F	G	H	H1	ØJ
NA 09	6	244	174	424	120	68	188	270	108	170
NA 15	6	265	184	455	139	85	224	274	108	170

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NA / NA-X ELECTRIC ACTUATOR

SCHEMA ELECTRIQUE NA RBP



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