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)	

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

SECTORIEL S.A.
45 rue du Ruisseau
38290 SAINT QUENTIN-FALLAVIER – FRANCE
Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95
www.sectoriel.com / Email : sectoriel@sectoriel.fr

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

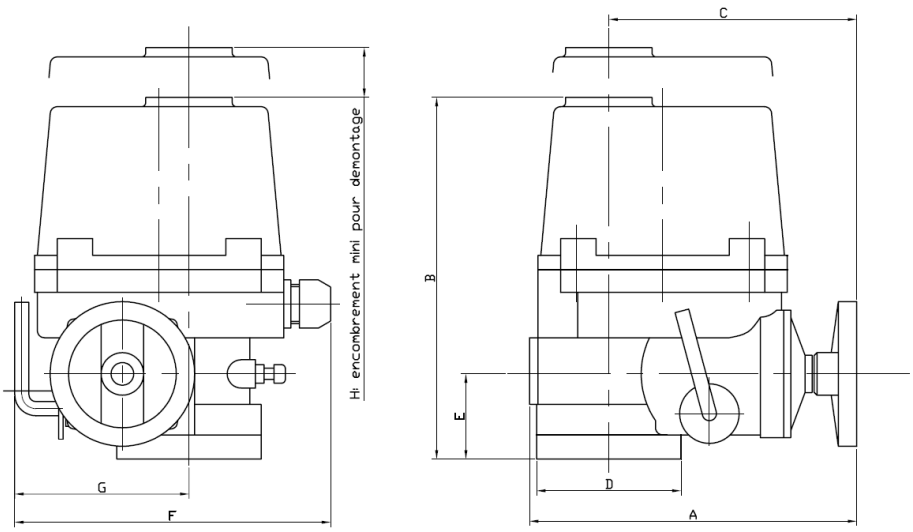
Motor protection	Thermal	**Anti-condensation**	20 W heater
Limit switches	2 adjustable switches	**NA electrical connection**	2 x C.G. M20x1.5
Auxiliary switches	2 adjustable dry switches	**NA-X electrical connection**	2 x C.G. M20x1.5 ATEX (**NOT SUPPLIED on option**)

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						

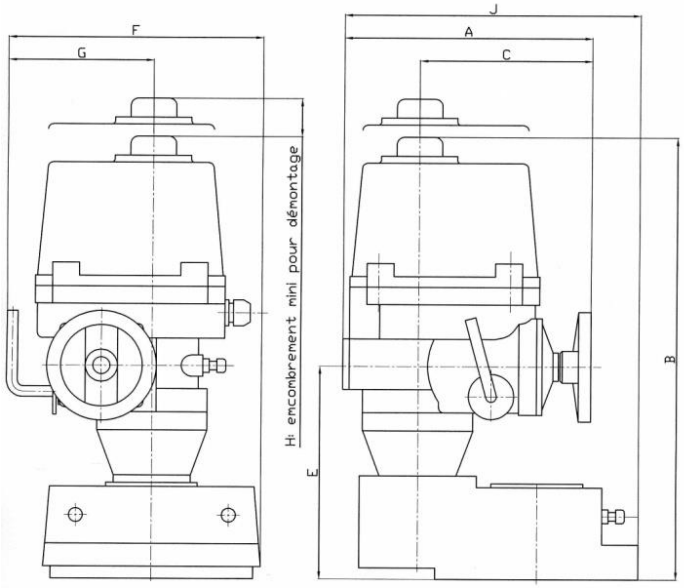
Information given as an indication only, and subject to possible modifications

DIMENSIONS (mm)

NA 06 to NA 100



NA 150 to NA 250



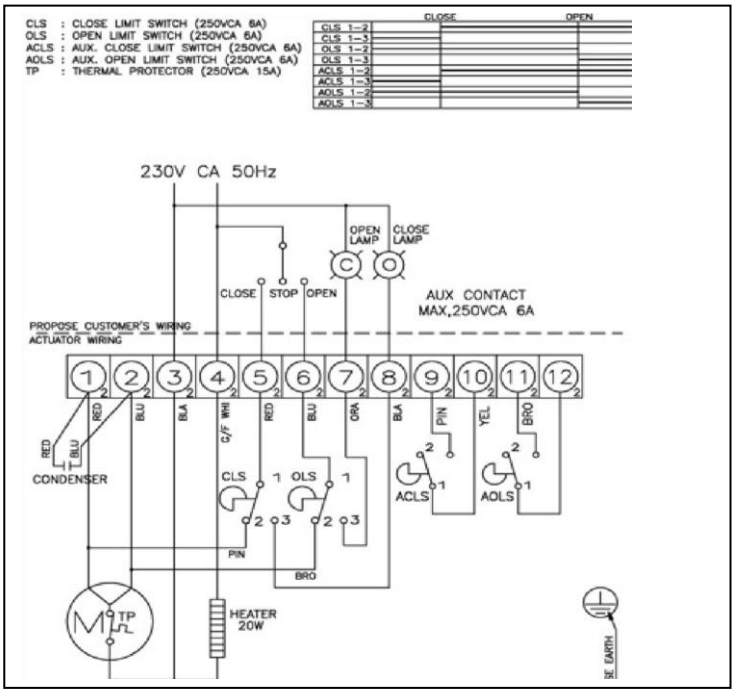
NA	A	B	C	D	E	F	G	H
06-09	231	255	175	102	60	223	113	108
15	261	255	184	120	60	266	139	108
28-38	285	302	202	145	70	300	159	130
60-100	325	343	226	175	78	349	191	178
150-200-250	325	556	226	-	273	388	191	178

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

WIRING DIAGRAM

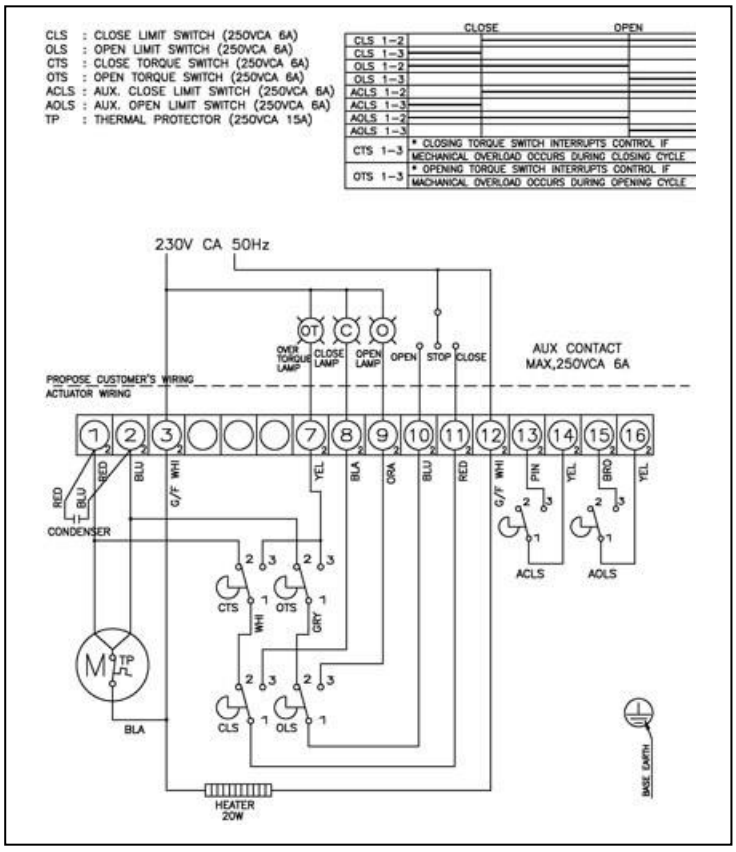
Wiring for 230V 50Hz voltage (NA06-NA09)

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)

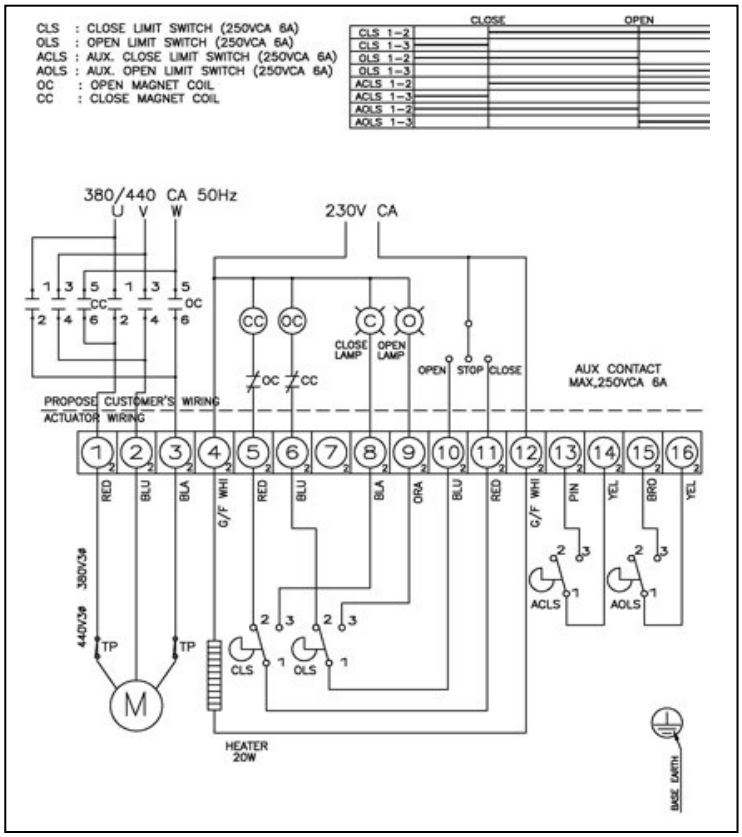
1	Do not use
2	Do not use
3	Common
7	Overheating indicator light (suggestion)
8	Closing indicator light (suggestion)
9	Opening indicator light (suggestion)
10	Opening command
11	Closing command
12	phase
13	Closing auxiliary
14	Closing auxiliary
15	Opening auxiliary
16	Opening auxiliary



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

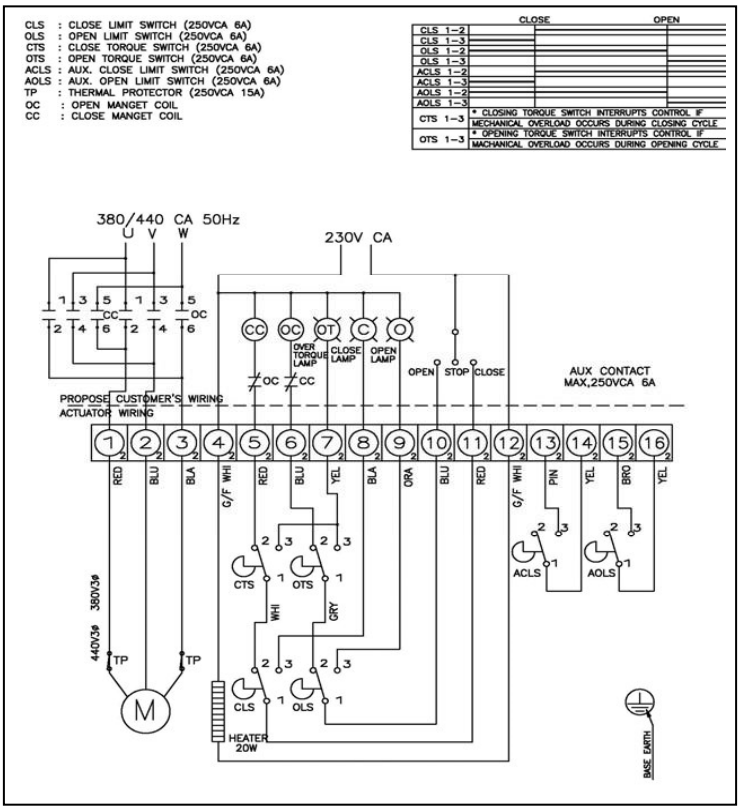
Wiring for 380V 50Hz voltage (NA06-NA09)

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)

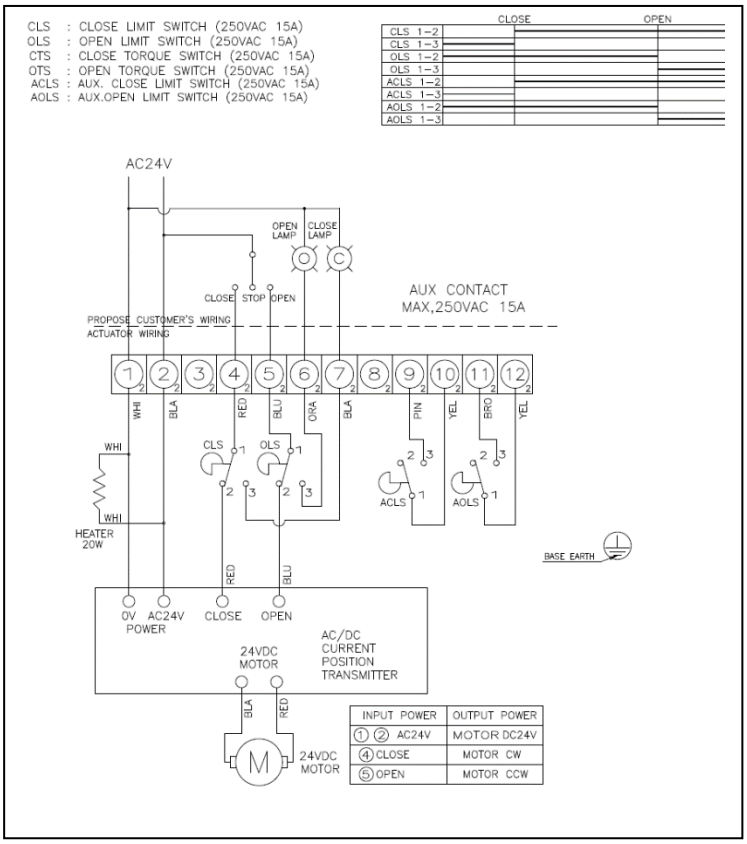
1	U phase
2	V phase
3	W phase
4	Heater power supply
5	Connected to the closing 11
6	Connected to the opening 10
7	Overheating indicator light (suggestion)
8	Closing indicator light (suggestion)
9	Opening indicator light (suggestion)
10	Opening command
11	Closing command
12	Heater power supply
13	Closing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



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

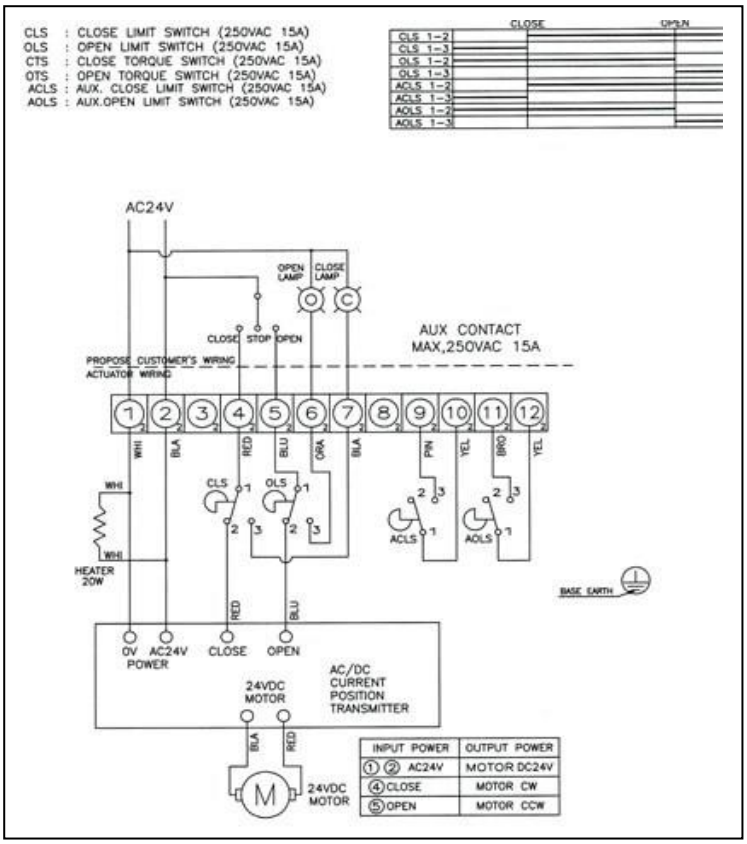
Wiring for 24V 50Hz voltage (NA06-NA09)

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)

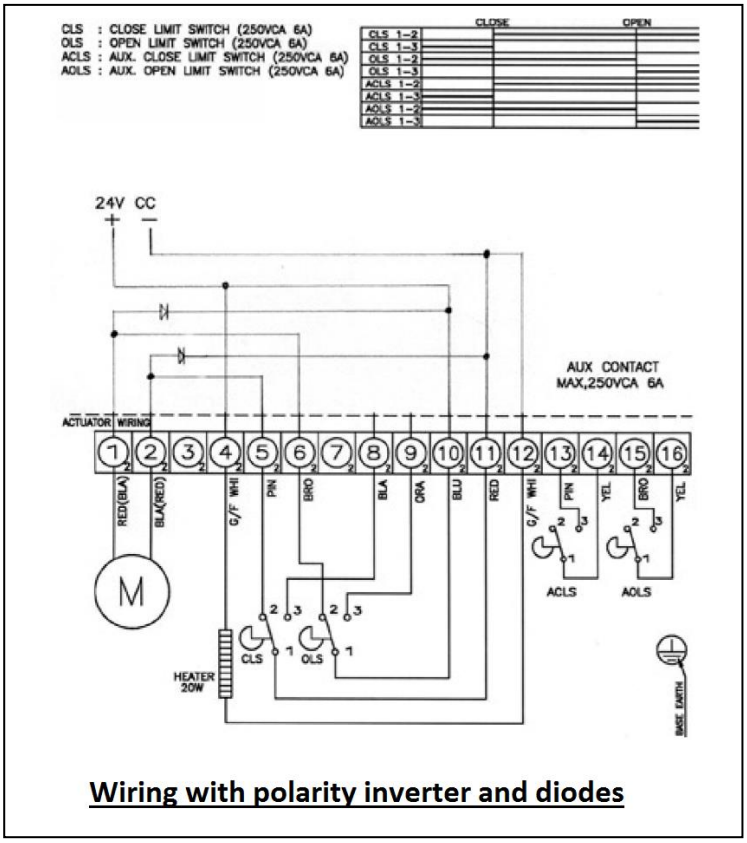
1	Common
2	phase
3	Not used
4	Closing command
5	Opening command
6	Opening indicator light (suggestion)
7	Closing indicator light (suggestion)
8	Not used
9	Closing auxiliary
10	Closing auxiliary
11	Opening auxiliary
12	Opening auxiliary



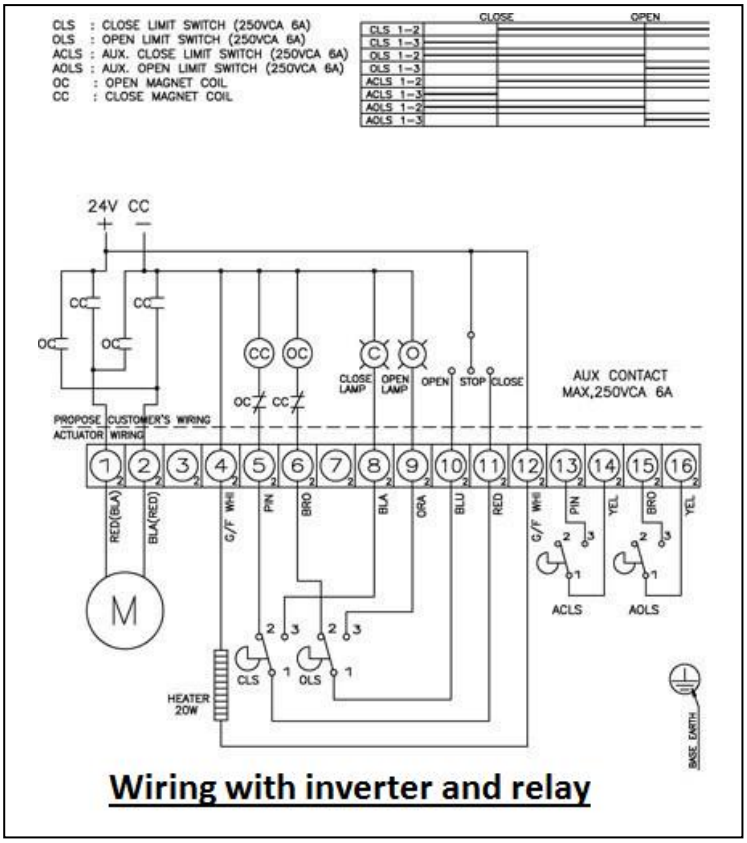
Information given as an indication only, and subject to possible modifications

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



Wiring with polarity inverter and diodes

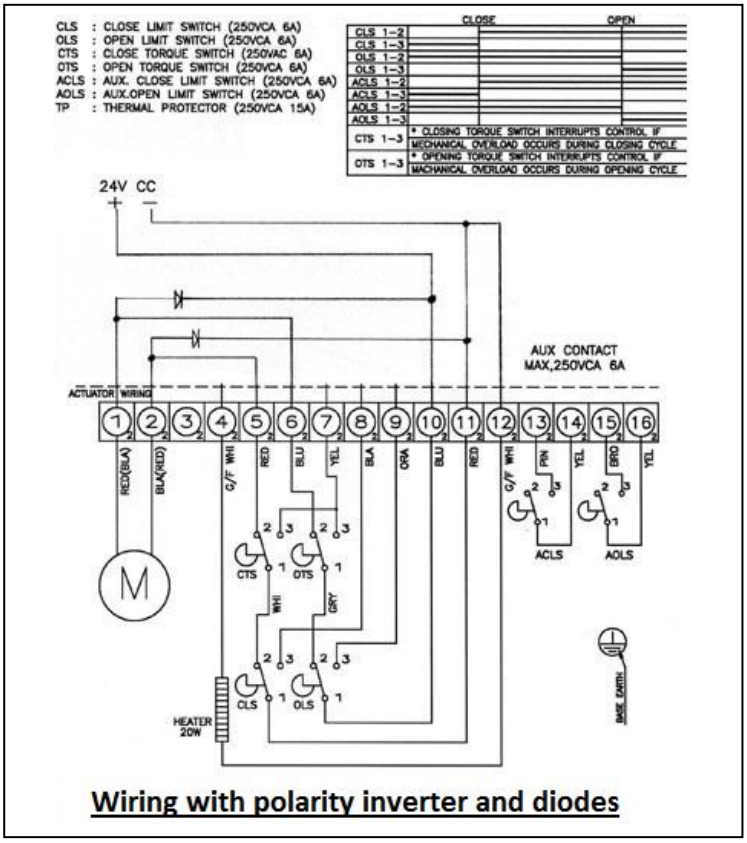


Wiring with inverter and relay

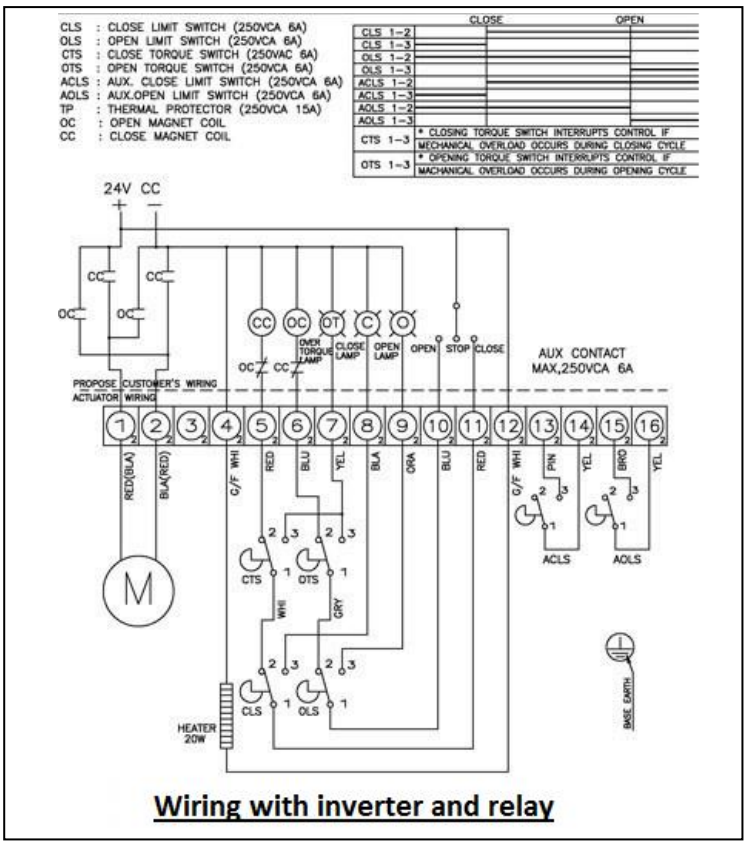
Information given as an indication only, and subject to possible modifications

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



Wiring with polarity inverter and diodes



Wiring with inverter and relay

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

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.

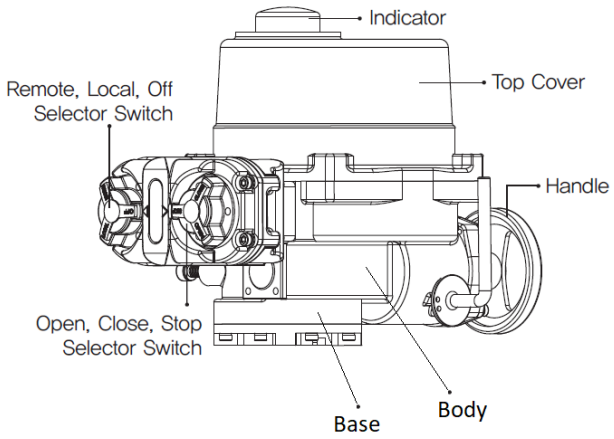
AVAILABLE MODELS

NA09 LCU : 90 Nm
NA15 LCU : 150 Nm
NA28 LCU : 280 Nm
Supply voltages : 230 Vac, 400 Vac



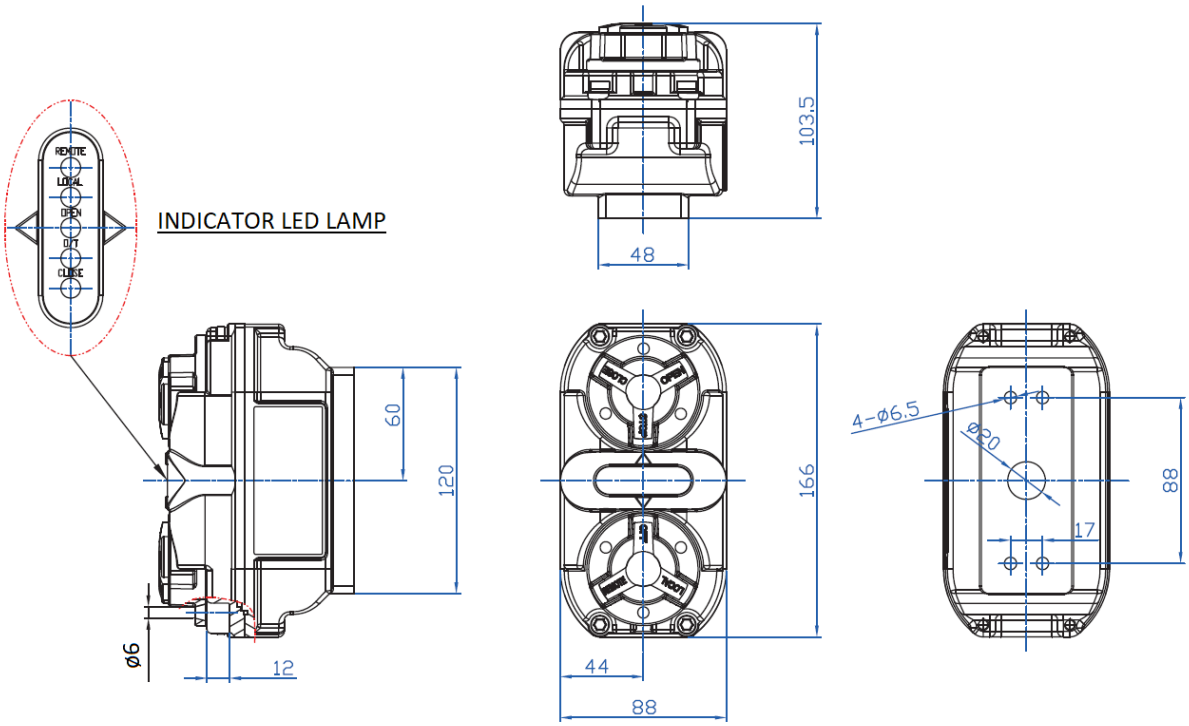
SPECIFICATION

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



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

DIMENSIONS (mm)





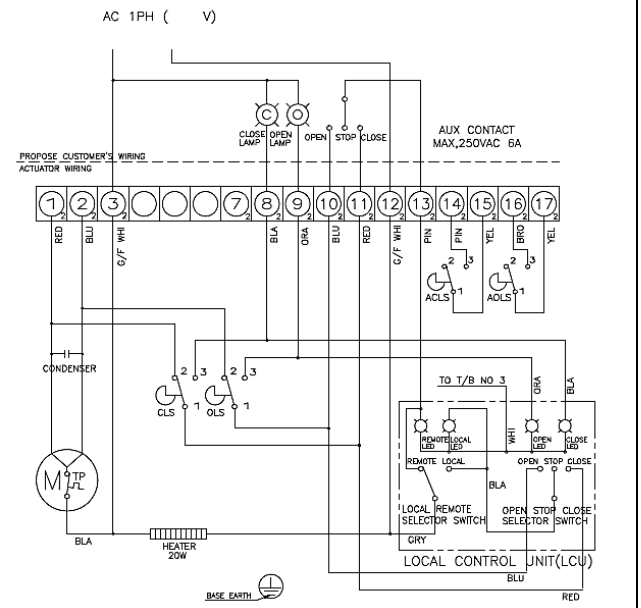
Information given as an indication only, and subject to possible modifications

ELECTRICAL DIAGRAM NA LCU

NA09 230V

CLS : CLOSE LIMIT SWITCH (250VAC 6A)
OLS : OPEN LIMIT SWITCH (250VAC 6A)
ACLS : AUX. CLOSE LIMIT SWITCH (250VAC 6A)
AOLS : AUX.OPEN LIMIT SWITCH (250VAC 6A)
TP : THERMAL PROTECTOR (250VAC 15A)

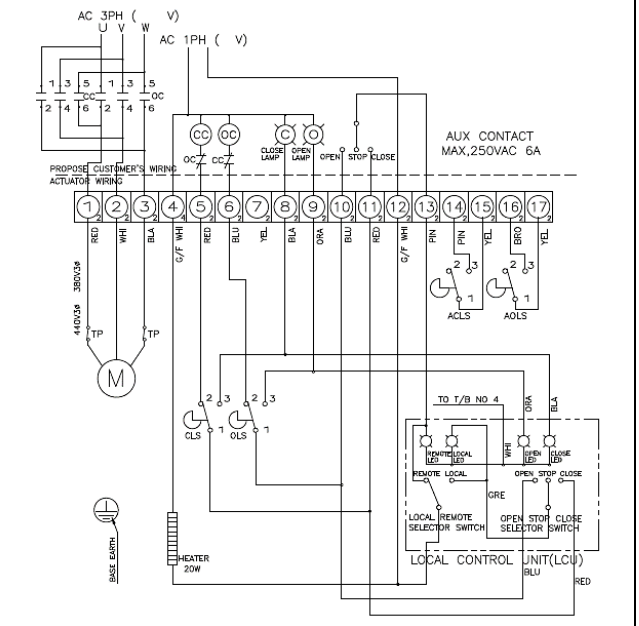
	CLOSE	OPEN
CLS 1–2		
CLS 1–3		
OLS 1–2		
OLS 1–3		
ACLS 1–2		
ACLS 1–3		
AOLS 1–2		
AOLS 1–3		



NA09 380V

CLS : CLOSE LIMIT SWITCH (250VAC 6A)
OLS : OPEN LIMIT SWITCH (250VAC 6A)
AOLS : OPEN LIMIT SWITCH (250VAC 6A)
ACLS : CLOSE LIMIT SWITCH (250VAC 6A)
CC : CLOSE MAGNETIC COIL
OC : OPEN MAGNETIC COIL
TP : THERMAL PROTECTOR

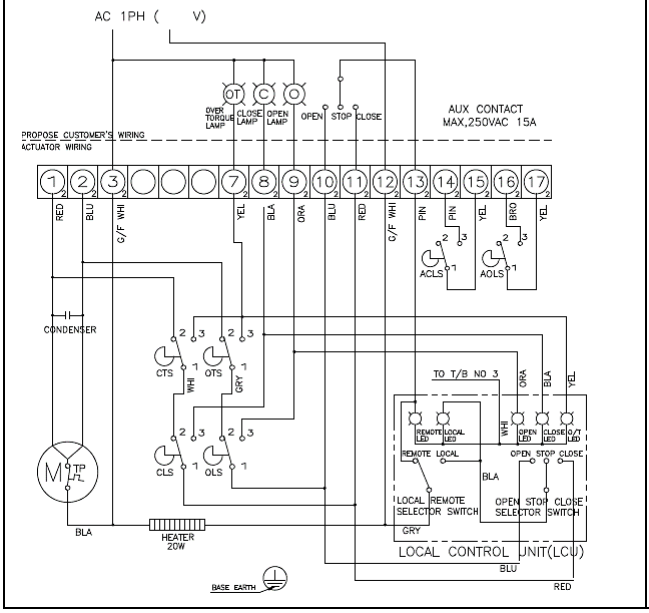
	CLOSE	OPEN
CLS 1–2		
CLS 1–3		
OLS 1–2		
OLS 1–3		
ACLS 1–2		
ACLS 1–3		
AOLS 1–2		
AOLS 1–3		



NA15 230V

CLS : CLOSE LIMIT SWITCH (250VAC 15A)
OLS : OPEN LIMIT SWITCH (250VAC 15A)
CTS : CLOSE TORQUE SWITCH (250VAC 15A)
OTS : OPEN TORQUE SWITCH (250VAC 15A)
ACLS : AUX. CLOSE LIMIT SWITCH (250VAC 15A)
AOLS : AUX.OPEN LIMIT SWITCH (250VAC 15A)
TP : THERMAL PROTECTOR (250VAC 15A)

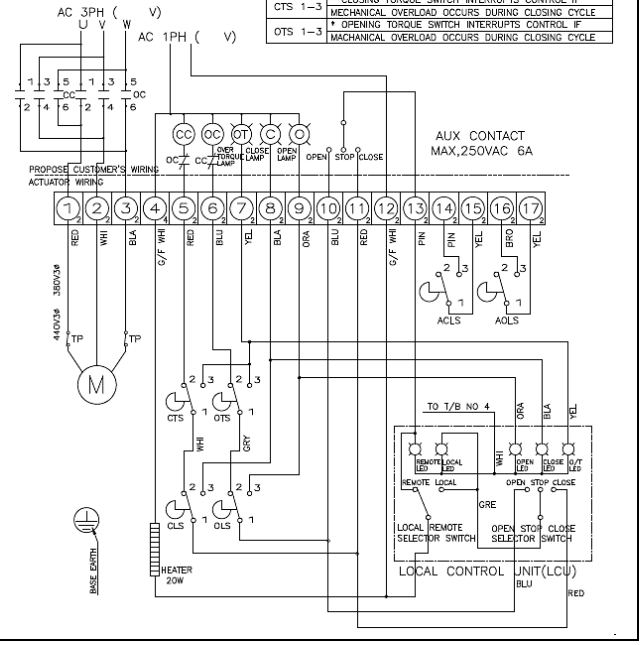
	CLOSE	OPEN
CLS 1–2		
CLS 1–3		
OLS 1–2		
OLS 1–3		
ACLS 1–2		
ACLS 1–3		
AOLS 1–2		
AOLS 1–3		
CTS 1–3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE	
OTS 1–3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MACHANICAL OVERLOAD OCCURS DURING OPENING CYCLE	



NA15 380V

CLS : CLOSE LIMIT SWITCH (250VAC 6A)
OLS : OPEN LIMIT SWITCH (250VAC 6A)
CTS : CLOSE TORQUE SWITCH (250VAC 6A)
AOTS : OPEN TORQUE SWITCH (250VAC 6A)
ACTS : CLOSE TORQUE SWITCH (250VAC 6A)
OTS : OPEN TORQUE SWITCH (250VAC 6A)
CC : CLOSE MAGNETIC COIL
OC : OPEN MAGNETIC COIL
TP : THERMAL PROTECTOR

	CLOSE	OPEN
CLS 1–2		
CLS 1–3		
OLS 1–2		
OLS 1–3		
ACLS 1–2		
ACLS 1–3		
AOLS 1–2		
AOLS 1–3		
CTS 1–3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE	
OTS 1–3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MACHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE	



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

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

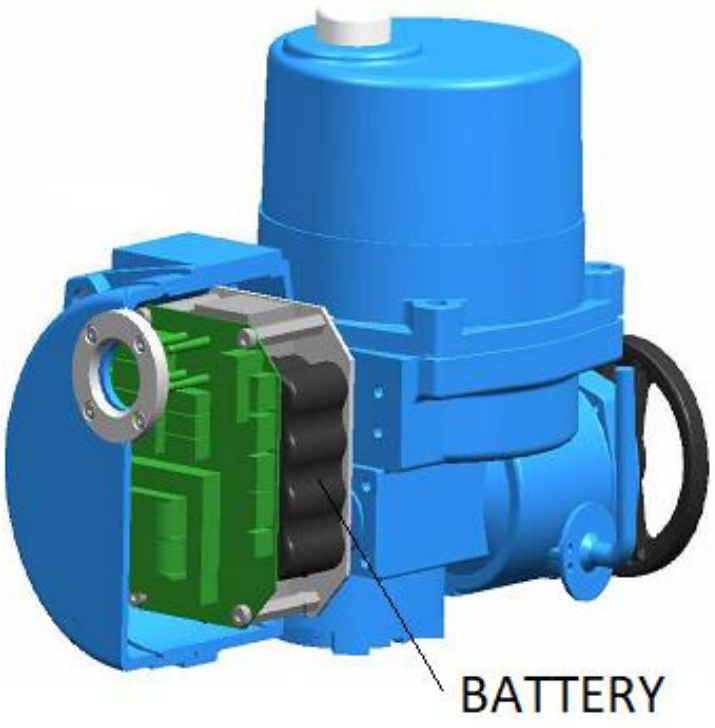




SPECIFICATION

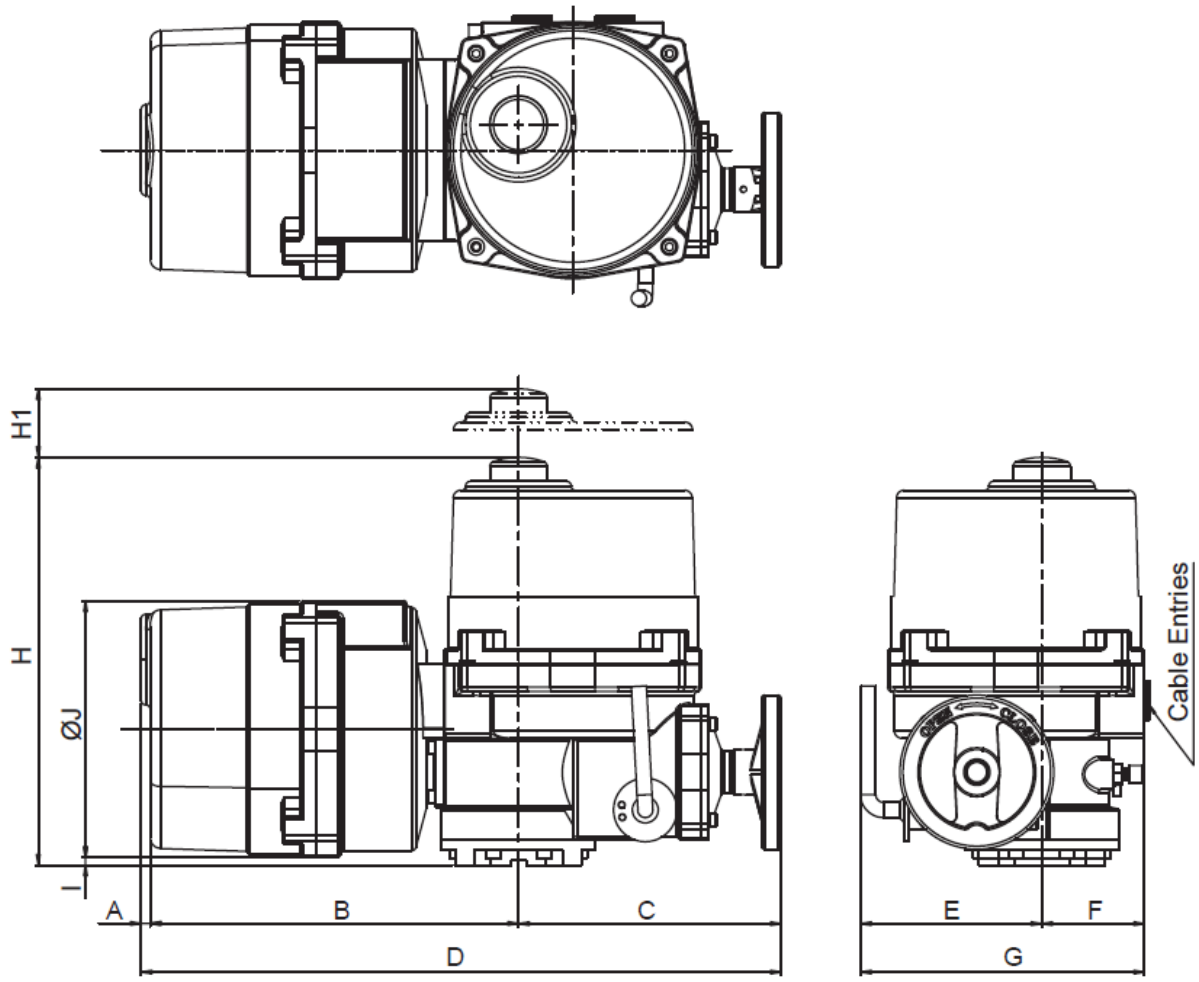
1	IP rating : IP67
2	Housing : aluminium
3	Return to position due to lack of power
4	Power supply : 230V - 50 / 60Hz
5	Built-in battery safety unit
6	Battery size : 89 x 111 x 44 Charging volt : DC 32V 1A Charging time : 3 heures Battery type : Ni-Cd 1,2V 20EA Emergency (time) : 15 minutes (Max) Battery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





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

DIMENSIONS (mm)

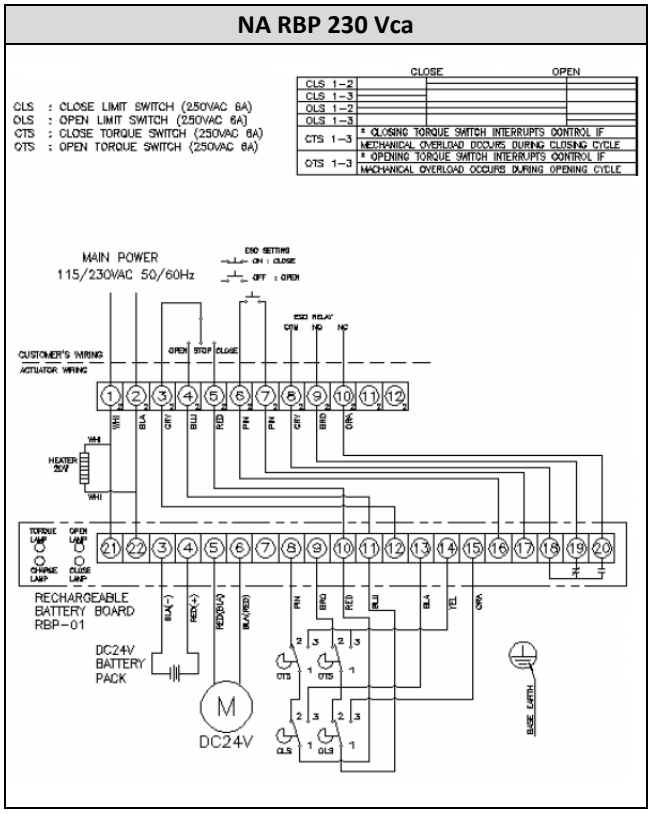


Rep	A	B	C	D	E	F	G	H	H1	ØJ
NA 09	6	244	174	424	120	68	188	270	108	170
NA 15	6	265	184	455	139	85	224	274	108	170

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

SCHEMA ELECTRIQUE NA RBP

NA RBP 230 Vca



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