FEATURES

The 711 XS + NA 2-way ball valve is designed for the automatic shut-off of networks of non-loaded industrial fluids, up to a pressure of 40 bar. This 3-piece external tie-bolt ball valve is easy to remove for servicing. This full-bore valve has an anti-static device and double sealing at the cable gland. It is EC, ATEX fire safety- and TA-LUFT approved. The ISO 5211 mounting pad enables the NA actuator to be directly assembled. This is perfectly adapted to both indoor and outdoor industrial use.

SÉCU FEU

IP

67

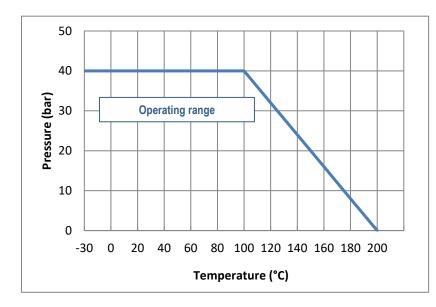
AVAILABLE MODELS

DN 65 to DN 100 diameters. PN40 RF flange connection.

Supply voltages : 24 Vcc, 24 Vac, 230 Vac et 400 V Tri.

LIMITS OF USE

Fluid pressure: PS	40 bar (20°C)
Fluid temperature: WT	-30°C / +200°C
Ambient temperature	- 20°C / +80°C
Service factor	S2 - 70%





3.1

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DIRECTIVES AND MANUFACTURING STANDARDS

OBJECT	Standard	ON	OBJECT	Standard
Pressure Equipment	DN 65 to DN 100: category III	TÜV 0035	Final test	NKS 12266
Directive 2014/68/EC	<u>DN 65 to DN 100</u> . category in	100 0035	Material certificate	NKS 10204
Size	EN 12516-1		Motorisation connection	ISO 5211
Steel grades	EN 1503-1		Motorisation kit	NKS 15081
ATEX Directive	II 2G/D Tx zones 1,2,21 and 22	SIRA 0518		
ATEX Directive	EN 13463-1 and 5			
Fire safe	API 607/4 - EN10497-5			

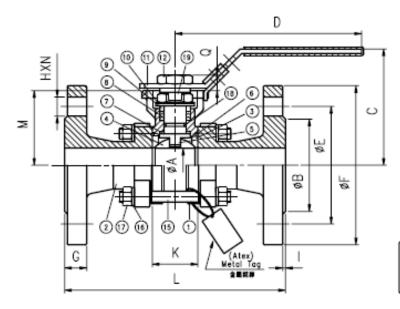


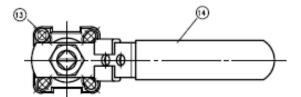
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711XS VALVE WITH NA ELECTRIC ACTUATOR

CONSTRUCTION

No.	Name	Material	No.	Name	Material
1	Body	1.4408	12	Nut	304 SS
2	Ends	1.4408	13	Pointer	304 SS
3*	Seats	PTFE+50% stainless steel	14	Coupling	PVC
4	Ball	CF8M / 316	15	Tie-bolts	304 SS
5	Stem	316 SS	16	Washer	304 SS
6*	Body gasket	Graphite	17	Nuts	304 SS
7*	Washer	PTFE+15%GF	18*	O-ring	FPM
8*	Gasket	Graphite	19	Tab washer	304 SS
9	Spacer	304 SS	20	Anti-static	316 SS
10	B. washer	301 SS	21	Spring	316 SS
11	Lever	304 SS		••	



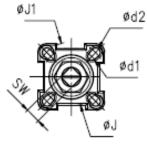


GROOVE



FIRE SAFE DETAIL





DIMENSIONS (mm)

DN	Α	В	С	D	E	F	SW	d1	d2	М	Q	к	L
65	65	122	155	300	145	185	17	9	11	107	17.1	82.1	290
80	80	138	165	335	160	200	17	9	11	117.3	17.1	95.8	310
100	100	162	180	335	190	235	17	9	11	132.3	17.1	117.8	350



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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 ΔP =10 bar max.

The actuator's assembly is direct.

DN	Actuator	Power (W)	Time (s)*	Standard equipment of the actuator
65	NA 09	25 W	17 s	2 adjustable limit switches + 2 dry auxiliaries Condensation-resistance 20 W
80	NA 09	25 W	17 s	Position visual indicator Thermal protection of the motor (NA09)
100	NA 15	40 W	20 s	Torque limiter (NA15) <u>Electrical connection</u> : 2 x M20 x 1.5 glands Manual override by handwheel

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		
NA LCU:	<u>NA PCU</u> :	<u>NA RBP</u> :	<u>NA-X</u> :	<u>SR</u> :		
Local control unit	4-20mA or 0-10V	fail safe/security	zone ATEX 1 and 2	spring return fail safe		
actuator	proportional control	electric actuator	actuator	actuator		
	unit actuator					
6	thermal dispersion yoke	for high temperature fluids	5			
7	7 100mm high steel height adjustment for installing heat-insulation					
8	actuator dimensioned for an upstream / downstream pressure difference ΔP greater than 10 bar					
9	NA actuator with handwheel override					

INSTALLATION IN AN ATEX ZONE

For 711XS+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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ASSEMBLY AND MAINTAINANCE INSTRUCTIONS

1 - Installation

1.1 - 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 ball and damage the seats, hence causing the valve to leak. If need be, install an upstream filter.
- Check that there is no risk of thermal expansion of the fluid, which could damage the seats. In the open position, a hole at the top of the ball balances the pressures between the body cavity and the flow of the fluid. As an option, we recommend a relief hole upstream of the valve for equalising the pressures for fluids such as ammonia, LPG, chlorine, etc.
- 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 seats, in particular in the event of high pressure and/or temperature. For this special application, preferably use our "V-port" version with a V-shaped hole in the ball. 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 within the body cavity could become negative, which could lead to a significant deformation of the seats. 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.
- o If the valve is installed in an explosive zone, you must follow the additional "IMEVMATEX" instructions.

1.2 - Storage before installation

- Follow our general "IMESTOCK" instructions for storage.
- Check that the tie-bolts of the valves were not loosen during transport.

1.3 - Installation

- Before any installation, isolate the piping upstream and downstream, depressurize the piping and bring the installation to ambient temperature. Carefully clean the piping of any particle (foreign body, dust, rust, etc.) or shavings by water rinsing or air blowing.
- \circ $\,$ $\,$ For valves with a size above DN50, plan to use a hoist.
- Remove the protective plates from the valve flanges
- Check the cleanliness of the internal surfaces of the valve and if need be, clean them.
- Direction of mounting: the valves do not have a preferred direction of mounting, unless a relief hole was drilled into the ball.
- Check the perfect alignment and the proper support of the pipe installation upstream and downstream of the valve. Alignment defects cause mechanical deformations which can block the valve or lead to leaks at the body gaskets.
- Check that the standards for the valve flanges (PN40 as per1092-1) and the pipe installation, are the same.
- Select flange gaskets suitable for the fluid and the flange standard for the valve (PN40).

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



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711XS VALVE WITH NA ELECTRIC ACTUATOR

• Stock up on hex-head nuts and bolts as shown in the table below:

DN	Screw	Number	Tightening torque (Nm)	DN	Screw	Number	Tightening torque (Nm)
15	M12 x 35	4	35	50	M16 x 55	4	86
20	M12 x 40	4	35	65	M16 x 55	4	86
25	M12 x 45	4	35	80	M16 x 60	8	86
32	M16 x 45	4	86	100	M16 x 60	8	86
40	M16 x 50	4	86				

- Screw the screw through the flanges 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.
 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.

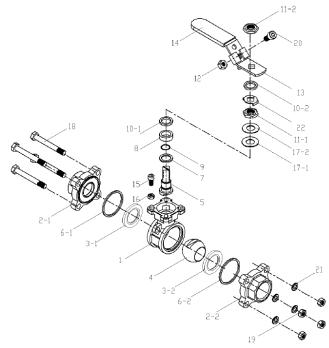
2 - Service

- If a hot fluid flows across the valve, do not touch the valve surface.
- Always operate the valve slowly and smoothly.
- Opening clockwise, closing anti-clockwise.

3 - Servicing

3.1 - Frequency of servicing

- The servicing frequency depends upon the use of the valve, of the type of fluid, of its velocity, of its frequency of operation, of the cycles of rise and fall in pressure and temperature.
- Before any intervention, isolate the upstream and downstream pipe installation using the valves provided for this purpose. Depressurize the pipe installation and bring it to ambient temperature.
- If the lever has to be removed, do that before disassembling the body.
- To remove the central body, unscrew the tie-bolts symmetrically. Then gently remove the central part avoiding to drop the ball.
- To remove the ball from the body, turn the stem by a quarter turn.





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3.2 - Inspecting the state of the valve and possible repair

- Check the state of the ball (Item 4): it has to be clean and unscratched. If the cleaning or polishing is not possible, replace it (see the § on spare parts).
- Check the state of the seats (3.1 and 3.2): they must not be deformed, nor scratched, nor worn, or dirty. Otherwise, replace them with parts from the gasket kit.
- Check the state of the packing gland (7.8 and 9): no leak should be found at the stem and the rings should not be excessively worn. If need be, replace the gaskets.
- Check the state of the body gaskets (6.1 and 6.2). Replace them if necessary.
- Reassemble the different parts of the valve, following the tightening torques shown in the table below.
- Check that the stem manoeuvring is smooth. Perform about ten manoeuvres.

TABLE OF THE TIGHTENING TORQUES OF THE TIE-BOLTS AND OF THE LEVER NUT

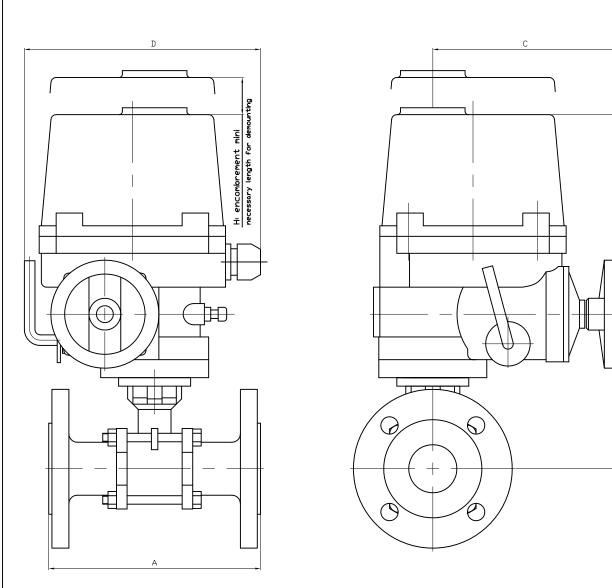
DN	Tie-bolts	Torque (Nm)	Lever nut (Nm)
15	M6	190	4
20	M8	220	4
25	M8	250	4.5
32	M10	310	4.5
40	M10	410	5.5
50	M10	410	5.5
65	M12	1000	7
80	M16	1220	7
100	M16	1430	7

SPARE PARTS

DN	Gasket kit	Ball	V30° ball	V60° ball	Tie-bolt kit	Lever
Reference mark	6-7-8-18	4	4	4	15-16-17	11
15	982872	980032	980042	980052	982832	982802
20	982873	980033	980043	980053	982833	982802
25	982874	980034	980044	980054	982834	982804
32	982875	980035	980045	980055	982835	982804
40	982876	980036	980046	980056	982836	982806
50	982877	980037	980047	980057	982837	982806
65	982878	Please contact us.	Please contact us.	Please contact us.	982838	982808
80	982879	Please contact us.	Please contact us.	Please contact us.	Please contact us.	982808
100	982880	Please contact us.	Please contact us.	Please contact us.	Please contact us.	982808



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DN	DN65	DN65 DN80		
SER∨D	NA09	NA09	NA15	
A	290	310	350	
В	380	390.3	405.3	
С	175	175	184	
D	223	223 223		
н	108	108	108	
KG	30.3	36.9	51.4	

Ech:/	Date :16/03/2017	Dessiné par : E.D.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
RD	BINET A TOURN		Matiére :			
	SER∨DMDTEUR	711XS + R NA/ELECTRIC	Poids (Kg) :			
	SECT	Traitement : SANS				
			SAINT QUENTIN FALLA∨IER	Plan n° Ens	1286	

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

<u>NA06: 60 Nm to NA250</u>: 2500 Nm <u>Supply voltages</u>: 230V AC, 400V AC, 24V AC, 24V DC

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)						



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

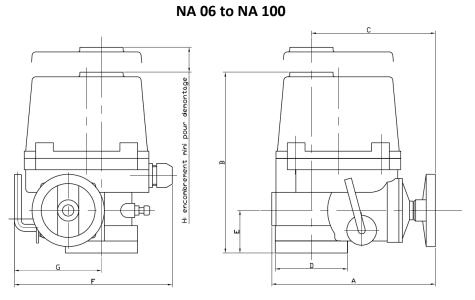
Motor protection	Thermal	Anti-condensation	20 W heater
Limit switches	2 adjustable switches	NA electrical connection	2 x C.G. M20x1.5
Auxiliary switches	2 adjustable dry switches	NA-X electrical connection	2 x C.G. M20x1.5 ATEX (NOT SUPPLIED on option)

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					22	0V – 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					24	IV – 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						

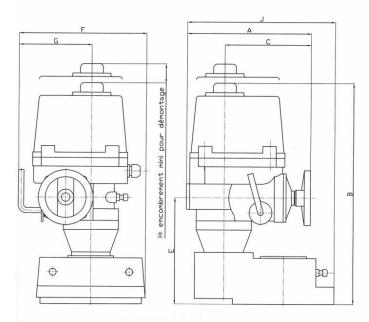


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DIMENSIONS (mm)



NA 150 to NA 250



NA	А	В	С	D	E	F	G	н
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



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.

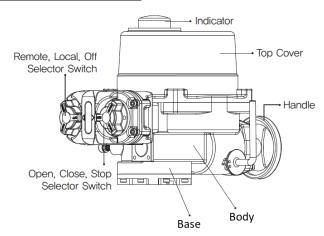
AVAILABLE MODELS

<u>NA09 LCU</u> : 90 Nm <u>NA15 LCU</u> : 150 Nm <u>NA28 LCU</u> : 280 Nm <u>Supply voltages</u> : 230V AC, 400V AC

SPECIFICATION

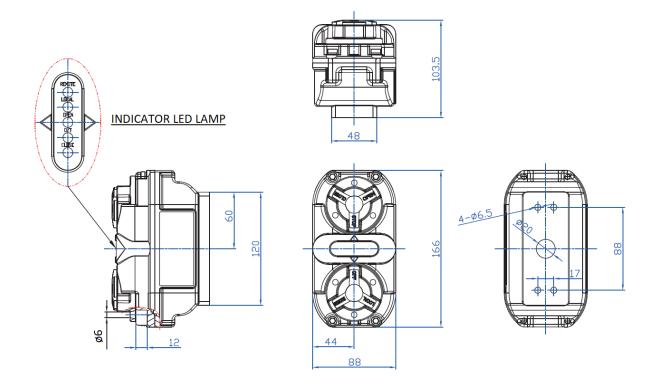
1	IP code : IP67
2	Housing : aluminium
3	Remote, Off, local selector switch
4	Open, stop, close selector switch
5	Remote, local, open, over torque, close LED Lamp
6	Pad lockable





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DIMENSIONS (mm)

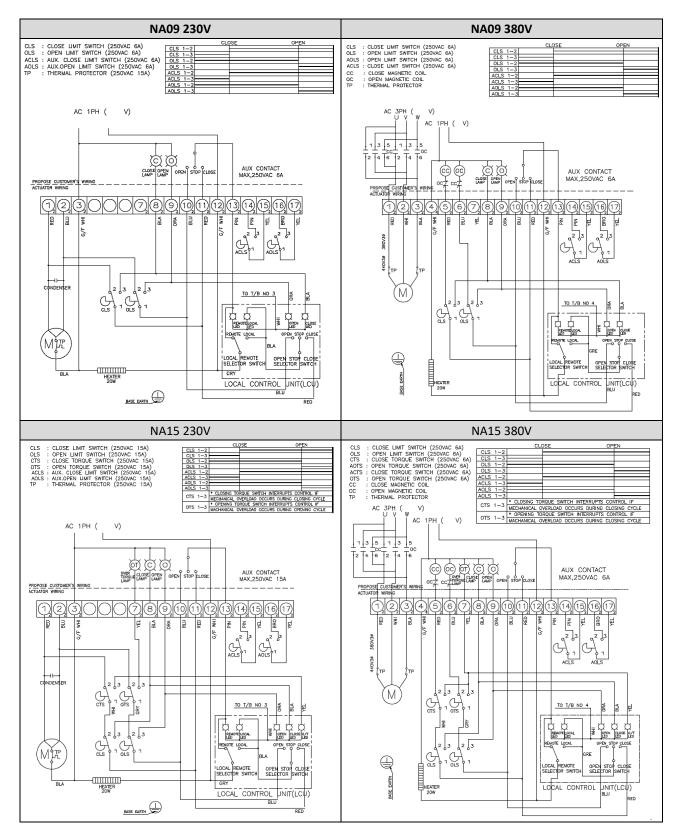




Remote, local, open, Over torque, close LED lamp

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ELECTRICAL DIAGRAM NA LCU





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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

<u>NA09 RBP</u> : 90 Nm <u>NA15 RBP</u> : 150 Nm <u>Supply voltage</u> : 230V AC



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	

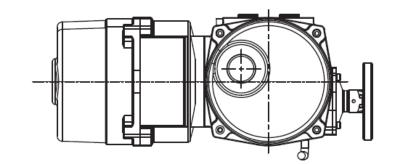


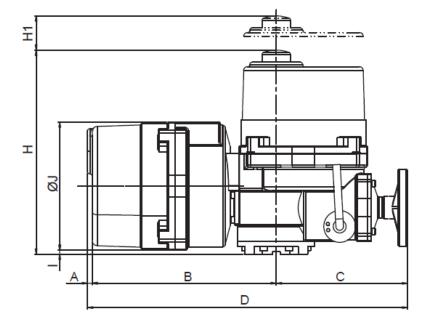


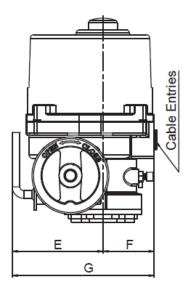
DIMENSIONS (mm)

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NA / NA-X ELECTRIC ACTUATOR



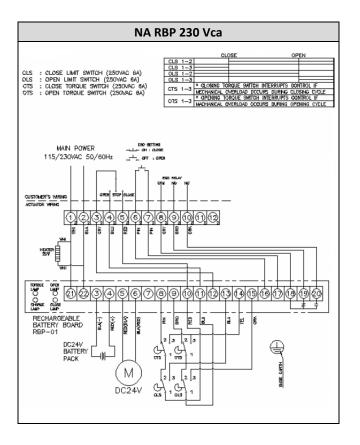




Rep	А	В	С	D	E	F	G	Н	H1	۵ı
NA 09	6	244	174	424	120	68	188	270	108	170
NA 15	6	265	184	455	139	85	224	274	108	170

SCHEMA ELECTRIQUE NA RBP







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