

USE

- automation systems on watercrafts
- automation systems in industrial and civil vehicles
- industrial systems using hot and cold fluids
- systems using alternative energy
- automation plants
- drinking water systems, with suitable ball valve
- compressed air systems

Diamant DC



Diamant DC ISO 5211



Compact DC

KEY FEATURES

- electric "ALL IN ONE" control
- IP67 class protection
- extra microswitches in opening and closing position
- different operating times




TECHNICAL FEATURES	Diamant DC		Compact DC	
Electric control	ALL IN ONE 2/3-point			
Connection with ball valve	Comparato • ISO 5211 F03/F05		ISO 5211 F03/F05	
Operation	ON/OFF			
Rotation angle	90° • 180°			
Power supply *	12V DC	24V DC	12V DC	24V DC
Nominal torque consumption (standard version)	0,5 A	0,3 A	0,4 A	0,25 A
Motor	Bidirectional DC			
Electrical connection	Internal terminal block			
Rated torque	5 Nm	8 Nm	11 Nm	22 Nm
Operating times for 90°	1 sec	3 sec	5 • 8 • 12 **• 30 sec	10 sec • 30 sec **
Overcurrent protection	Fuse ***			
Maximum noise (at 1 meter distance)	47 dB(A)		52 dB(A)	
Power output of extra micros	1A, resistive			
Operational room temperature	- 10° C + 50° C			
Protection degree	IP67			
External covering	Glass-filled "polyarylamide" technopolymer			
Material of external metal components and seals	AISI 303 GVR • silicone seals			
Maintenance	None			
Certification	CE			

* they can also be powered by alternating current

** standard version

*** on DIAMANT DC only for 30 sec version

VERSIONS

Actuator	Rotation angle	Operating time	Power supply	Base code
Diamant DC COMPARATO connection 	90°	12 sec	12V DC	MRC11PJ- MRC11PD- MRC11PJ-8 MRC11PD-8
	90°	12 sec	24V DC	
	180°	24 sec	12V DC	
	180°	24 sec	24V DC	
Diamant DC ISO 5211 connection 	90°	12 sec	12V DC	MRC11J- MRC11D- MRC11J-8 MRC11D-8
	90°	12 sec	24V DC	
	180°	24 sec	12V DC	
	180°	24 sec	24V DC	
Compact DC 	90°	30 sec	12V DC	MRC22J- MRC22D- MRC22J-8 MRC22D-8
	90°	30 sec	24V DC	
	180°	60 sec	12V DC	
	180°	60 sec	24V DC	

ACCESSORIES

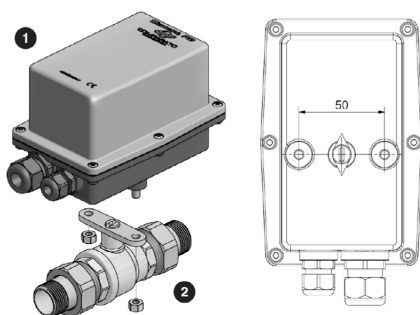
The **DC Range** actuators can have different operating times by adding the corresponding symbol at the end of the code.

Operating times
1 sec (90°) • 5 Nm
3 sec (90°) • 8 Nm
5 sec (90°) • 11 Nm
8 sec (90°) • 11 Nm
30 sec (90°) • 11 Nm

Operating times
10 sec (90°)
22 Nm

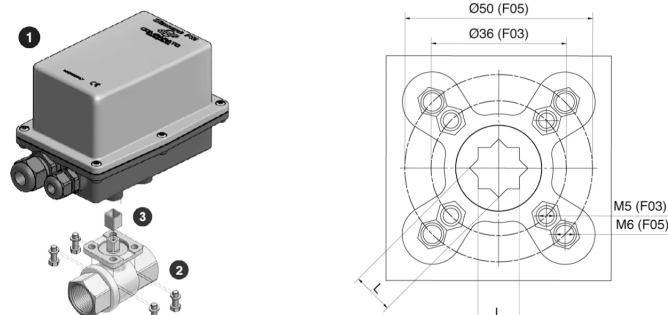
CONNECTION TO THE BALL VALVE

Diamant DC
COMPARATO connection



- 1 : Diamant DC COMPARATO connection
- 2 : Ball valve

Diamant DC ISO 5211 connection
Compact DC



- 1 : DC Range actuator ISO 5211 connection
- 2 : Ball valve
- 3 : Panel adapter (if necessary)

ISO 5211 connection	
F03	9 mm
F05	11 mm

ELECTRICAL CONNECTIONS

The internal electrical circuit of the actuator is an **ALL IN ONE** type.

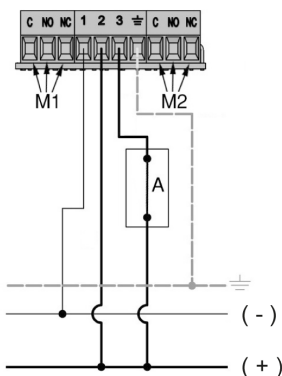
The actuator can be connected either with a **2-POINT** or **3-POINT** control.

2-POINT CONTROL – ON/OFF (SWITCH)

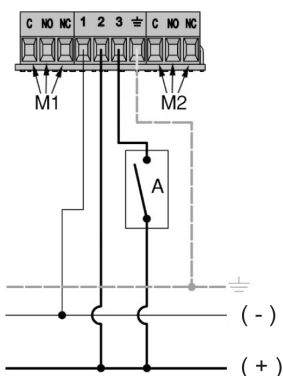
The voltage on terminal 3 can be supplied by means of a switch.

One electric control can activate several actuators.

OPENING ACTUATOR



CLOSING ACTUATOR



- 1 - Negative (-)
- 2 - Closing control (+)
- 3 - Opening control (+)
- M1 - Opening auxiliary micro
- M2 - Closing auxiliary micro

A - Switch-type control
⊕ - Earth

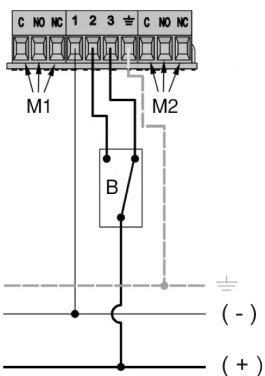
If powered by alternating current
(-) = Neutral
(+) = Phase

3-POINT CONTROL – ON/OFF (DIVERTER)

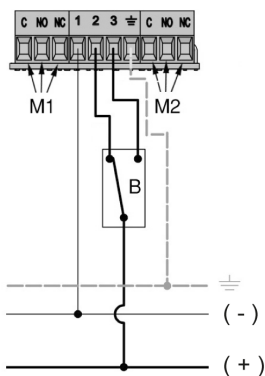
Voltage shall be diverted to terminal 2 or terminal 3.

Each actuator must be operated by a single electric control.

OPENING ACTUATOR



CLOSING ACTUATOR



- 1 - Negative (-)
- 2 - Closing control (+)
- 3 - Opening control (+)
- M1 - Opening auxiliary micro
- M2 - Closing auxiliary micro

B - Deviator-type control
⊕ - Earth

If powered by alternating current
(-) = Neutral
(+) = Phase

AUXILIARY MICROSWITCHES

The layout of the extra microswitch contacts is shown in the following pictures:

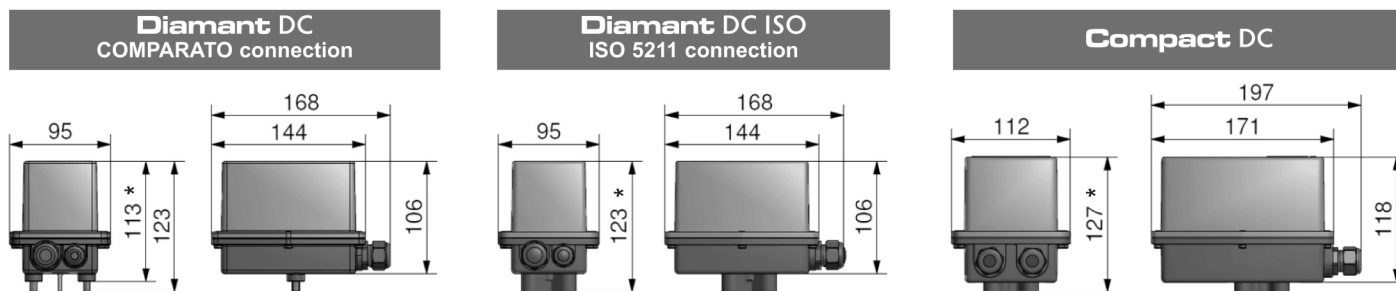
M1 • OPENING AUXILIARY MICROSWITCH



M2 • CLOSING AUXILIARY MICROSWITCH



OVERALL SIZE



* the size is to be taken into account when coupling the actuator to the ball valve.

BALL VALVE ASSIGNMENT - LISTED COUPLINGS

The **Diamant DC** actuator with Comparato connection can be combined with the ball valves shown in the "Diamant PRO" data sheet Brass ball valves - DP1.0 -21". The **Diamant DC attacco ISO** and **Compact DC** actuators can be combined with the ball valves shown in the table. Versions with spacer for insulation or spacer for insulation and manual opening are available.



DN	Ø	2-way BRASS	3-way BRASS "T"- port "L"- port	3-way BRASS Mixing Diverting	2-way INOX	3-way INOX "T"- port "L"- port	2-way PVC	3-way PVC "T"- port "L"- port	2-way FLANGED BALL VALVE cast iron	BUTTERFLY	
-	1/4"	DIAMANT DC ISO	DIAMANT DC ISO	-	-	DIAMANT DC ISO	-	-	-	-	
10	3/8"	DIAMANT DC ISO	DIAMANT DC ISO	-	-	DIAMANT DC ISO	DIAMANT DC ISO	AVAILABLE ON DIAMANT DC WITH COMPARATO CONNECTION	-	-	
15	1/2"	DIAMANT DC ISO	DIAMANT DC ISO	DIAMANT DC ISO	DIAMANT DC ISO	DIAMANT DC ISO COMPACT DC	DIAMANT DC ISO		-	-	
20	3/4"	DIAMANT DC ISO	DIAMANT DC ISO COMPACT DC	DIAMANT DC ISO	DIAMANT DC ISO	COMPACT DC	DIAMANT DC ISO		-	-	
25	1"	DIAMANT DC ISO	COMPACT DC	DIAMANT DC ISO COMPACT DC	DIAMANT DC ISO COMPACT DC	COMPACT DC	DIAMANT DC ISO		COMPACT DC	-	
32	1"1/4	DIAMANT DC ISO COMPACT DC	COMPACT DC	COMPACT DC	COMPACT DC	-	DIAMANT DC ISO		COMPACT DC	COMPACT DC	
40	1"1/2	COMPACT DC	-	COMPACT DC	COMPACT DC	-	DIAMANT DC ISO COMPACT DC		COMPACT DC	-	COMPACT DC
50	2"	COMPACT DC	-	-	-	-	COMPACT DC		COMPACT DC	-	COMPACT DC