



## 780-781XS VALVES WITH UM ELECTRIC ACTUATOR

Model/Ref: 275400022060



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Without Limits.*

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## 780-781XS VALVES WITH UM ELECTRIC ACTUATOR

### CHARACTERISTICS

The 780XS+UM L-port and 781 XS+UM T-port stainless steel 3-way ball valves are dedicated to the mixing, diverting or automatic discharging of industrial unloaded fluids. This reduced bore ball valve has an antistatic device and complies with the EC and ATEX standards. The ISO 5211 pad allows a direct mounting of the UM actuator. It is perfectly suitable for an indoor or outdoor service (under shelter).

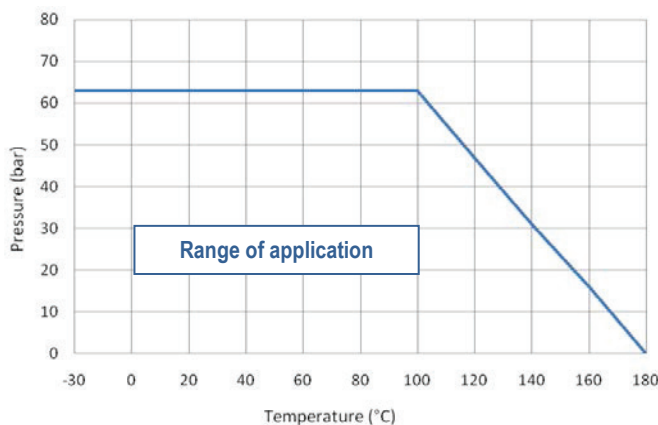
### AVAILABLE ITEMS

780XS: L-port / 781XS: T-port  
 1.4408 stainless steel (A351 CF8M) body  
 Size ¼" to 2"  
 BSP threaded connections  
 Voltages: 12 V CC, 24 V AC/DC and 230 V AC



### LIMITS OF USE

Max. allowable pressure (PS)	63 bar (20 °C)
Min./max. allowable temperature (TS)	-30 °C / +180 °C
Room temperature	-10 °C / +50 °C
Service	S4 – 30% - 10 stars/h



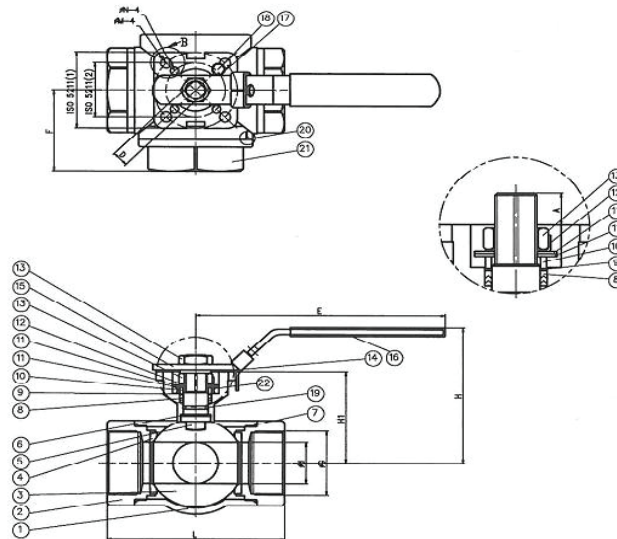
### DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE

	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment Directive	¼" to 1" : excluded		Valve testing	EN 12266
	1" ¼ to 2" : category III	TÜV #0035	Material certificate	EN 10204
Shell design	EN 12516-1		Actuator attachment	ISO 5211
Alloy grade	EN 1503-1			

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**780-781XS VALVES WITH UM ELECTRIC ACTUATOR**
**CONSTRUCTION**

#	Item	Material	#	Item	Material
1	Body	Stainless steel A351 CF8M / 1.4408	12	Locking washer	Stainless steel 304
2	End caps	Stainless steel A351 CF8M / 1.4408	13	Lever nut	Stainless steel 304
3	Ball	Stainless steel A351 CF8M / 1.4408	14	Washer	Stainless steel 304
4	Seats	PTFE	15	Lever	Stainless steel 304
5	Stem	Stainless steel 316	16	Sleeve	PVC
6	Stem O ring	PTFE	17	End stop	Stainless steel 304
7	Body gasket	PTFE	18	Nut	Stainless steel 304
8	Gland packing	PTFE	19	O-ring	FKM
9	Washer	TFM 1600	20	Body gasket	PTFE
10	Spacer	Stainless steel 304	21	Center cap	Stainless steel A351 CF8M / 1.4408
11	Belleville spring washer	Stainless steel 304	22	Spring	Stainless steel 304


**DIMENSIONS (mm)**

DN	¼"	3/8"	½"	¾"	1"	1" ¼	1" ½	2"
D	11	11	12.5	16	20	25	32	38
L	75.7	75.7	75.7	86.6	103	118.2	125.8	149
H	64.9	64.9	64.9	71.6	94.3	100	115.7	124.9
F	38.3	38.3	38.3	44.7	50.8	57.7	62.6	74.3
A	8.2	8.2	8.2	9.0	11.5	11.5	15.1	15.1
E	132	132	132	132	180	180	225	225
H1	36.8	36.8	36.8	44.1	55.1	60.7	75.2	84.4
D	9	9	9	9	11	11	14	14
ISO	F03/F04	F03/F04	F03/F04	F03/F04	F04/F05	F04/F05	F05/F07	F05/F07
Weight (kg)	0.33	0.33	0.33	0.5	0.9	1.7	2.2	3.8

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### ACTUATION WITH UM

Suggested standard UM actuation under the following conditions:

- Electric actuator with an IP 65 plastic 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 ( $=\Delta P$ )

Direct mounting of the electric actuator

DN	Actuator	Power	Operating time* 230 V AC	Operating time* 24 V AC/DC	Standard equipment of the actuator
¼"	UMA3.5	10 W	10 s	15 s	2 adjustable limit switches 2 dry auxiliary switches Actuator thermal cut-out Manual override by key Visual position indicator Electrical connection: UMA3.5: 1 gland pack. ½" PF UMC10: 2 gland packs. ½" PF
3/8"	UMA3.5	10 W	10 s	15 s	
½"	UMA3.5	10 W	10 s	15 s	
¾"	UMA3.5	10 W	10 s	15 s	
1"	UMA3.5	10 W	10 s	15 s	
1" ¼	UMA3.5	10 W	10 s	15 s	
1" ½	UMA3.5	10 W	10 s	15 s	
2"	UMC10	25 W	8 s	N/A	<b>Optional equipment</b> Anti-condensation heater

\*Unloaded operating time given for information purpose only. May vary depending on the medium

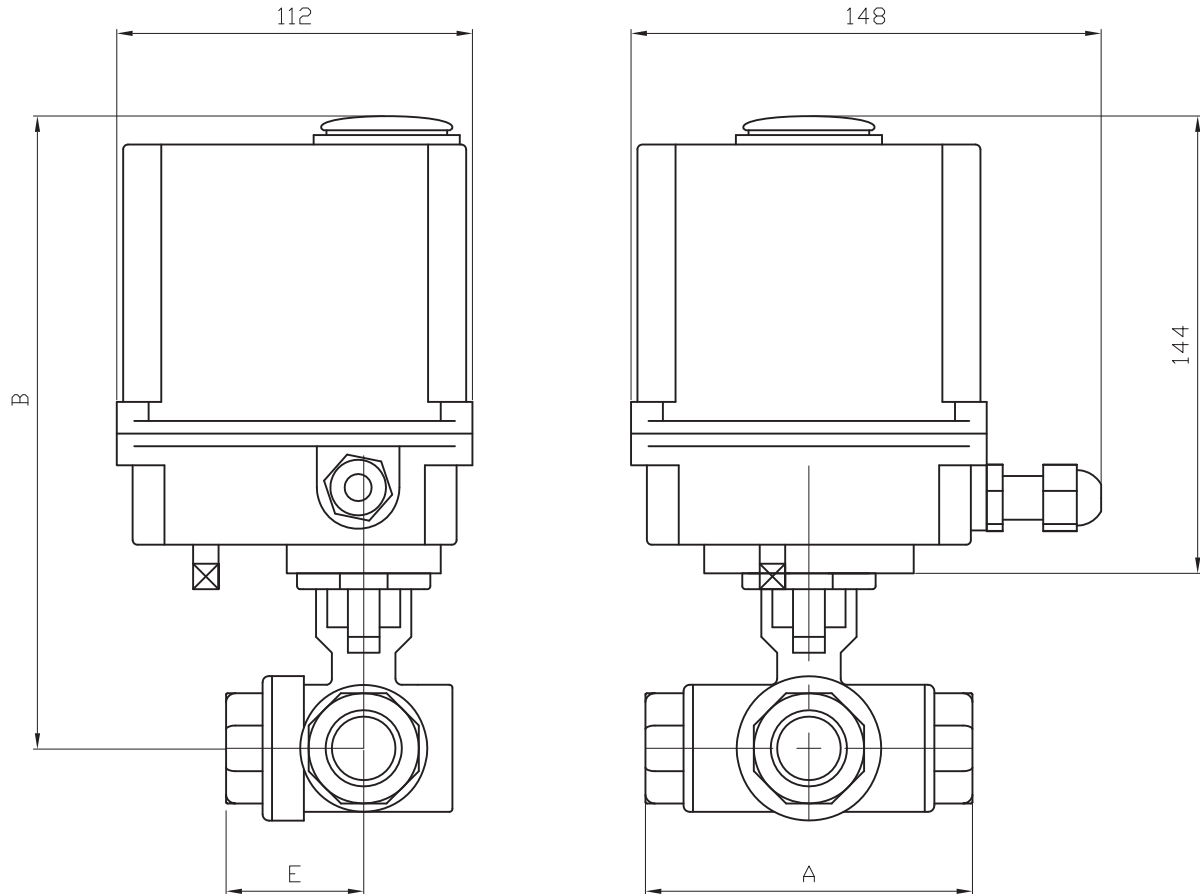
For any other working conditions, please contact us

### ACTUATION OPTIONS

There are many different options, please contact our commercial department.

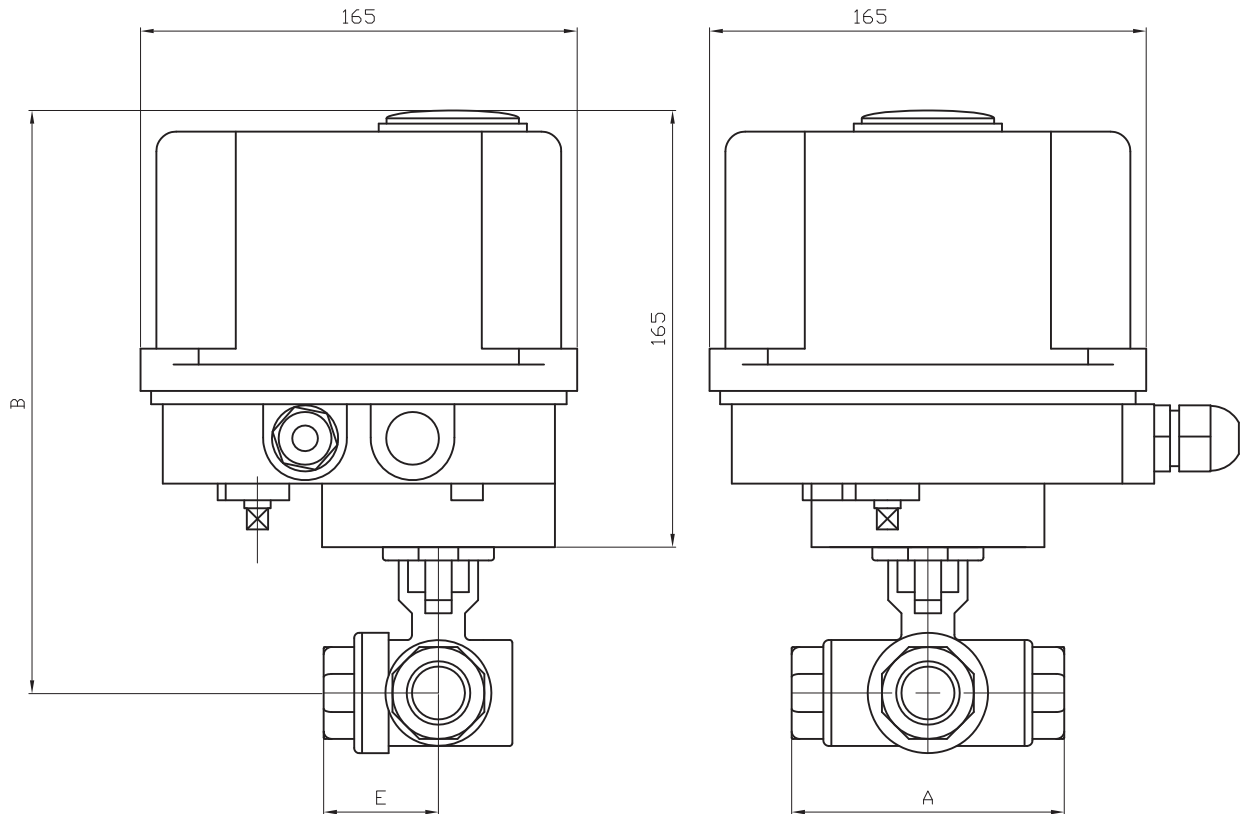
1	Thermal dispersion bracket for high temperature fluids (in accordance with the EN 15081 standard)
2	100 mm high stem extension for pipe insulation
3	Electric actuator sized for a maximum pressure differential up/downstream over 10 bar ( $=\Delta P$ )
4	UV electric actuator with a declutchable manual override by handwheel
5	Anti-condensation heater

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DN	08	10	15	20	25	32	40
A	75.7	75.7	75.7	86.6	103	118.2	125.8
B	180.8	180.8	180.8	188.1	199.1	204.7	219.2
E	38.3	38.3	38.3	44.7	50.8	57.7	62.6

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**780-781XS VALVES WITH UM ELECTRIC ACTUATOR**


DN	50
A	149
B	249.4
E	74.3

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## 780-781XS VALVES WITH UM ELECTRIC ACTUATOR

### GENERAL CHARACTERISTICS

The UMA3.5 electric actuator is used on ¼ turn valves. The maximum output torque is 15 Nm. Its compact construction with a plastic enclosure makes it convenient for actuation on small diameter ball valves and butterfly valves. Protection IP 65: possible use indoor and outdoor under shelter.




### AVAILABLE ITEMS

Voltage: 230 V AC, 24 V AC and 24 V DC

### LIMITS OF USE

Protection rating	IP 65
Temperature range	-10 °C / +55 °C
Service	S4-30%

### MECHANICAL CHARACTERISTICS

Gears	Treated steel pinions
Torque	35 Nm
Rotation angle	90° +/- 5°
Declutching	Switch
Manual override	Allen key

Electric actuator	UMA3.5			UML3.5
Voltage	230 V AC	24 V AC	24 V DC	230 V AC
Operating time	12 s	15 s	16 s	40 s
ISO 5211 pad	F03/F05 – star 14			



### ELECTRICAL CHARACTERISTICS

Motor protection	Thermal cut-out
Adjustable limit switches	2 adjustable switches
Auxiliary switches	2 adjustable dry switches
Anti-condensation	Optional
Electrical connection	2 gland packs. ½" PF

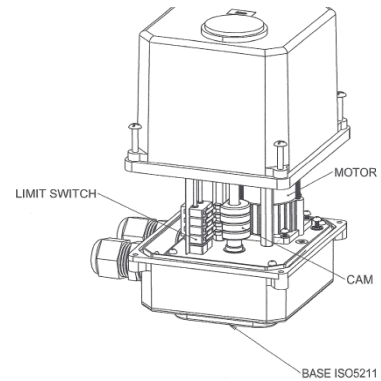
Electric actuator	UMA3.5			UML3.5
Voltage	230 V AC	24 V AC	24 V DC	230 V AC
Power	10 W	3 W	3 W	10 W
Intensity	0.25 A	0.15 A	0.15 A	0.25 A

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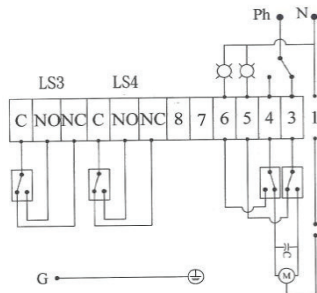
780-781XS VALVES WITH UM ELECTRIC ACTUATOR

**CONSTRUCTION**

Enclosure	PA 66 Plastic
Cover	PA 66 Plastic
Gears	Treated steel
Output	Star drive nut
Adjustable cams	Steel
Position indicator	Plexiglas®

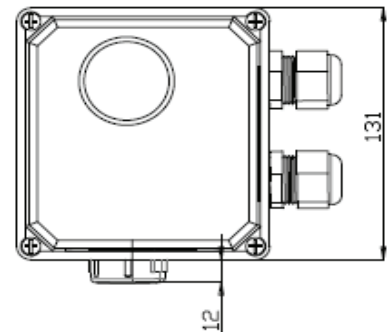


**WIRING SCHEME 230 V AC**

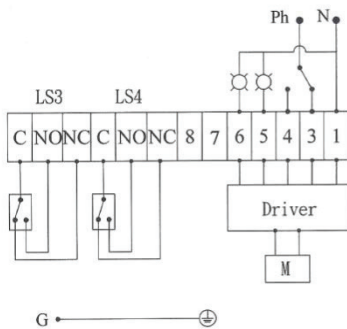


- 1 Common
  - 3 Opening phase
  - 4 Closing phase
  - 5 Open powered contact
  - 6 Close powered contact
  - 7 Heater
  - 8 Heater
- LS3 C-Auxiliary common dry open  
NO- NO Dry contact  
NC- NF Dry contact
- LS4 C-Auxiliary common dry close  
NO- NO Dry contact  
NC- NF Dry contact

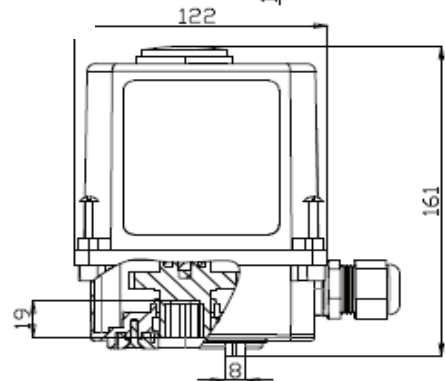
**DIMENSIONS (mm)**



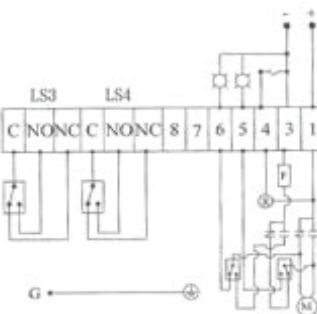
**WIRING SCHEME 24 V AC**



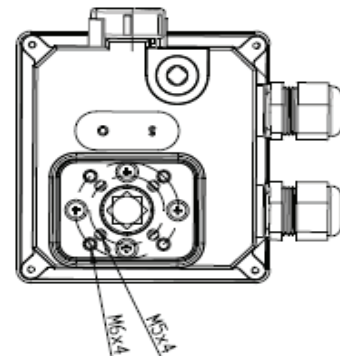
- 1 Common
  - 3 Opening phase
  - 4 Closing phase
  - 5 Open powered contact
  - 6 Close powered contact
  - 7 Heater
  - 8 Heater
- LS3 C-Auxiliary common dry open  
NO- NO Dry contact  
NC- NF Dry contact
- LS4 C-Auxiliary common dry close  
NO- NO Dry contact  
NC- NF Dry contact



**WIRING SCHEME 24 V DC**



- Wire 1 with +
  - Wire 3 with -
  - Bridge between 3 and 4 Opening
  - 5 Open powered contact
  - 6 Close powered contact
  - 7 Heater
  - 8 Heater
- LS3 C-Auxiliary common dry open  
NO- NO Dry contact  
NC- NF Dry contact
- LS4 C-Auxiliary common dry close  
NO- NO Dry contact  
NC- NF Dry contact



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## 780-781XS VALVES WITH UM ELECTRIC ACTUATOR

### GENERAL CHARACTERISTICS

The UMC and UMCL electric actuators are generally used on ¼ turn valves. The maximum output torque is between 100 Nm and 150 Nm. Its compact construction with a plastic enclosure makes it convenient for the actuation of small diameter ball valves and butterfly valves. Protection IP 65: possible use indoor and outdoor under shelter.

### AVAILABLE ITEMS

100 Nm and 150 Nm torque  
Voltage: 230 V AC, 24 V AC and 24 V DC

IP 65



### LIMITS OF USE

Protection rating	IP 65
Temperature range	-10 °C / +60 °C
Service	S4 - 30%

### MECHANICAL CHARACTERISTICS

Gears	Treated steel pinions
Rotation angle	90° +/- 5°
Declutching	N/A
Manual override	Allen key (except for UML version)

Electric actuator	UMC10	UMC15			UMC15L
Voltage	230 V AC	230 V AC	24 V AC	24 V DC	230 V AC
Torque	100 Nm	150 Nm			
Operating time	8 s	8 s	8 s	8 s	45 s
ISO 5211 pad	F07 – star 17				



### ELECTRICAL CHARACTERISTICS

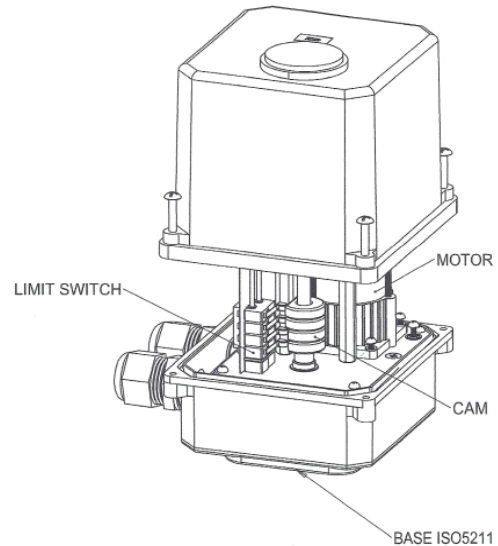
Motor protection	Thermal cut-out
Adjustable limit switches	2 adjustable switches
Auxiliary switches	2 dry adjustable switches
Anti-condensation	Optional
Electrical connection	2 gland packs ½" PF

Electric actuator	UMC10	UMC15			UMC15L
Voltage	230 V AC	230 V AC	24 V AC	24 V DC	230 V AC
Power	25 W	25 W	25 W	25 W	25 W
Intensity	0.42 A	0.42 A	0.5 A	0.5 A	0.42 A

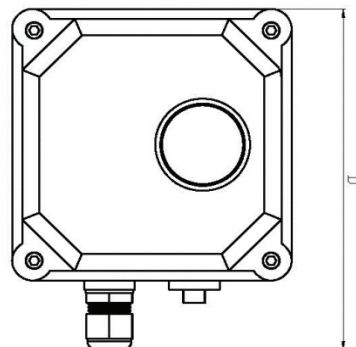
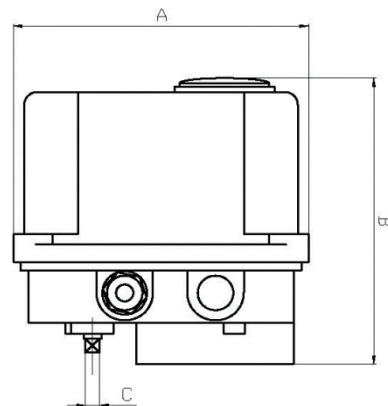
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**780-781XS VALVES WITH UM ELECTRIC ACTUATOR**
**CONSTRUCTION**

Enclosure	PA66 Plastic
Cover	PA66 Plastic
Gears	Treated steel
Output	Star drive nut
Adjustable cams	Steel
Position indicator	Plexiglas®

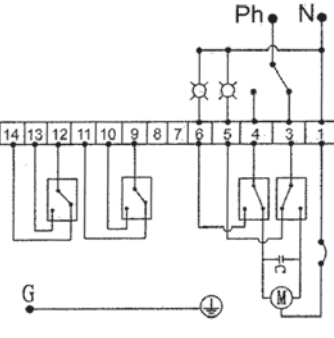
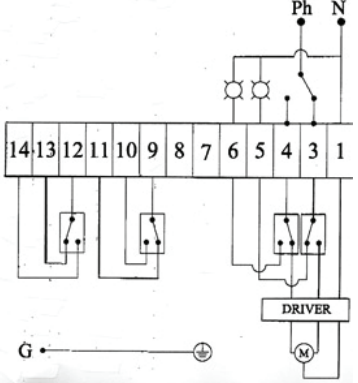

**DIMENSIONS (mm)**

A	165
B	165
C	8
D	200

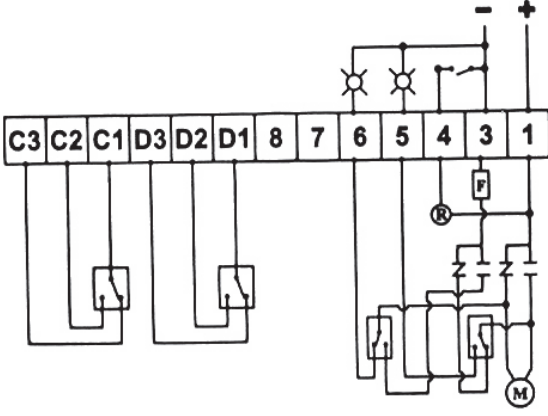


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**780-781XS VALVES WITH UM ELECTRIC ACTUATOR**
**WIRING SCHEME 230 V AC AND 24 V AC**

		230 V AC	24 V AC
1	Common		
3	Opening phase		
4	Closing phase		
5	Open powered contact		
6	Close powered contact		
7	Heater		
8	Heater		
9-C	Aux. common LS3 Opening		
10-NO	Aux. NO contact LS3 Opening		
11-NC	Aux. NC contact LS3 Opening		
12-C	Aux. common LS4 Closing		
13-NO	Aux. NO contact LS4 Closing		
14-NC	Aux. NC contact LS4 Closing		

**WIRING SCHEME 24 V DC**

	Wire 1 with +	
	Wire 3 with -	
	Bridge between 3 and 4 opening	
	Disconnected 4 closing	
5	Open powered contact	
6	Close powered contact	
7	Heater	
8	Heater	
D1	Aux. common #1	
D2	Aux. NO contact #1	
D3	Aux. NC contact #1	
C1	Aux. common #2	
C2	Aux. NO contact #2	
C3	Aux. NC contact #2	

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