

FIP - Manual Valve coupling with Actuators (Pneumatic Actuators or Motorized Actuators)

Description

FIP manual valves:-

Ball Valve: VKD Series, VXE Series DN65 - 100, VEE Series DN65 - DN100;
Butterfly Valve: FK Series & FE Series;

are design for actuator mounting regardless of Pneumatic or Motorized Actuators.

FIP Valves Range

| | Ball Valve | | Butterfly Valve |
|-----------------|---|---|---|
| Industry |  |  |  |
| Water Treatment |  |  |  |

Uni-D & Itork Motorized Actuator

Pneumatic Actuator

| | Motorized Actuators | | Pneumatic Actuators |
|----------------------------|---|--|---|
| Uni-D (General Purpose) |  | Sirca (Double Acting & Single Acting) |  |
| Itork (Heavy Duty) |  | | |

FIP - Manual Valve coupling with Actuators (Pneumatic Actuators or Motorized Actuators)

Actuation Valves – FIP Valves to Other Actuator

| | |
|---|--|
|  |  |
| Motorized Actuator | Pneumatic Actuator |
|  |  |
| Valve assembled with Bracket / Adaptor Plate & Actuator | |
|  |  |
| FIP VKD Ball Valve | FIP FE & FK Butterfly valve |

SIRCA Pneumatic Actuator



(AP SERIES)



(APM SERIES)

CE Ex II 2 GD

Specification:-

• Pressure range:

2 bar (29 psig) to 8 bar (116 psig) double acting
3 bar (44 psig) to 8 bar (116 psig) spring return
max. working pressure 10 bar (145 psig).

• Supply:

filtered dry or lubricated air.

For non corrosive gas water or light hydraulic oil
please check with Sirca's technical department.

• Temperature range:

STD -20°C (-4°F) a + 80°C (175°F)
on request +20°C (+68°F) a +150°C (302°F)
on request - 50°C (-58°F) a +100°C (212°F).

• Rotation:

counterclockwise when Port'A' is pressurized;
clockwise when PORT 'B' is pressurized
and for spring return actuators (see principle of operation).

• Stroke:

90° with standard adjustment $\pm 3^\circ$ (AP Series)
or bi-directional travel adjustment $\pm 5^\circ$ (APM Series).

• Lubrication:

all moving parts are factory lubricated for
cycle life of the actuator.

• Construction:

in accordance to "Equipment or Protective system
intended for use in potentially explosive atmosphere
directive 94/9/CE".

Suitable for indoor and outdoor installation.

• Connections:

bottom drilling to match valve is in accordance
with ISO 5211/DIN 3337 Interface for solenoid valve,
shaft top end and top drilling to assemble accessories
are in accordance with VDI / VDE 3845, NAMUR.

• Inspection:

each unit is hydraulically tested and certified
and guaranteed for a minimum of 500.000 moves.

Material:-

• Actuator body:

extruded aluminium alloy.

• End cap:

pressure die casting aluminium alloy

• Pinion:

E.N.P. Carbon steel or 303 S.S.

• Piston:

pressure die casting aluminium alloy

• Guide:

Acetal resin

• "O" rings:

Buna-n (NBR), FKM or Silicone

• Springs:

Epoxy coated spring steel

• Screws and nuts:

Stainless Steel

SIRCA Pneumatic Actuator

AIR CONSUPTION FOR STROKE AIR (FREE AIR) in liters

| Model | AP1 DA/SR | AP2 DA/SR | AP3 DA/SR | AP3.5 DA/SR | AP4 DA/SR | AP4.5 DA/SR | AP5 DA/SR | AP5.5 DA/SR | AP6 DA/SR | AP8 DA/SR | AP10 DA/SR |
|---------------------|-----------|-----------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|------------|
| Counter clockwise | 0.08 | 0.12 | 0.24 | 0.48 | 0.68 | 1 | 1.4 | 1.6 | 3.2 | 5.3 | 14.2 |
| Clockwise (DA only) | 0.10 | 0.16 | 0.44 | 0.56 | 0.96 | 1.6 | 2.16 | 2.56 | 4 | 8.6 | 16.5 |

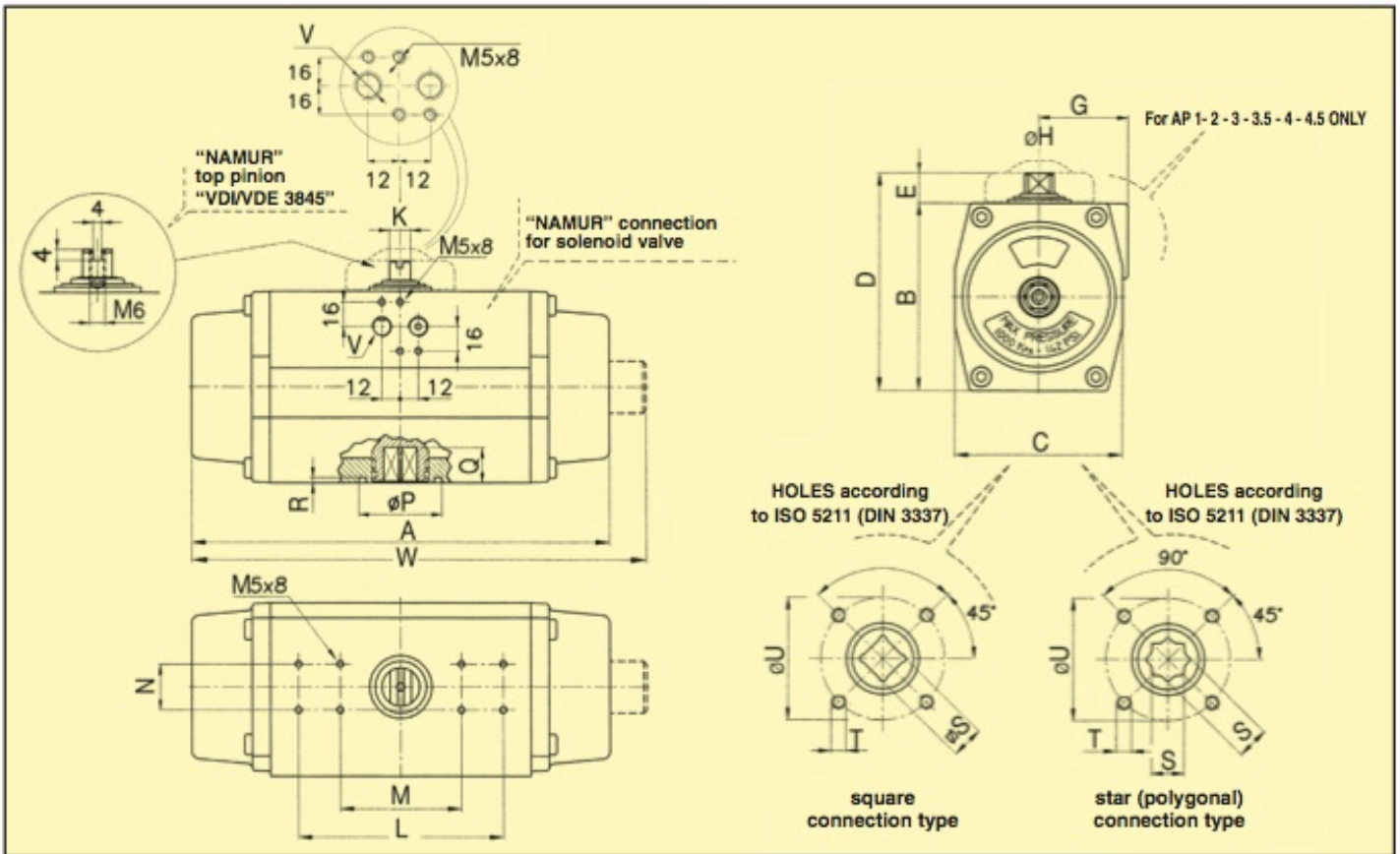
OPENING / CLOSING TIME (sec) at 5.6 bar/80 p.s.i.

| Model | AP1 | AP2 | AP3 | AP3.5 | AP4 | AP4.5 | AP5 | AP5.5 | AP6 | AP8 | AP10 |
|---------------|-----------------|-----------------|-----------------|-------------------|--------------------|-----------------|---------------------|--------------------|------------|----------|----------|
| Double Acting | Less than 1 Sec | Less than 1 Sec | Less than 1 Sec | Less than 1 Sec | Less than 1 Sec | Less than 1 Sec | Less than 1.25 Secs | Less than 1.5 Secs | 1.5÷2 Secs | 3÷4 Secs | 5÷6 Secs |
| Spring Return | Less than 1 Sec | Less than 1 Sec | Less than 1 Sec | Less than 1.5 Sec | Less than 1.5 Secs | Less than 1 Sec | 1.5÷2 Secs | 2 Secs | 2÷3 Secs | 4÷6 Secs | 7÷8 Secs |

*WEIGHTS in Kgs

| Model | AP1 | AP2 | AP3 | AP3.5 | AP4 | AP4.5 | AP5 | AP5.5 | AP6 | AP8 | AP10 |
|----------------|------|------|------|-------|------|-------|-------|-------|-------|-------|------|
| Double Acting | 1.15 | 1.60 | 2.80 | 4.28 | 5.80 | 8.26 | 11.63 | 14.15 | 21.70 | 40.10 | 110 |
| Spring Return* | 1.27 | 1.85 | 3.36 | 4.91 | 6.92 | 9.72 | 14.15 | 17.35 | 25.90 | 48.62 | 128 |

*Weights considering 6 (six) springs on each side of the caps



DIMENSIONS in mm

| Model | A | W* | B | C | D | E | F | G | H | K | L | M | N | P | Q | R | ∅S-S | T | U | V | ISO 5211 STD. | ISO 5211 SPECIAL |
|-------|-----|-----|-----|-----|-----|----|----|------|----|----|-----|----|----|-------|----|-----|---------|--------|--------|------|---------------|------------------|
| AP1 | 142 | 162 | 67 | 60 | 67 | 20 | 42 | 41 | 12 | 8 | - | 80 | 30 | 25 | 10 | 2 | 9/11** | M5/M6 | 36/50 | 1/8" | F03/F05 | F04 |
| AP2 | 155 | 171 | 83 | 73 | 103 | 20 | 42 | 44.5 | 12 | 8 | - | 80 | 30 | 30/35 | 12 | 2 | 11/14** | M5/M6 | 42/50 | 1/4" | F04/F05*** | - |
| AP3 | 213 | 240 | 100 | 85 | 120 | 20 | 50 | 49.5 | 14 | 10 | - | 80 | 30 | 35 | 16 | 3 | 14/17** | M6/M8 | 50/70 | 1/4" | F05/F07 | - |
| AP3.5 | 236 | 268 | 110 | 98 | 130 | 20 | 50 | 53 | 19 | 14 | - | 80 | 30 | 55 | 20 | 3.5 | 17/22** | M8 | 70 | 1/4" | F07 | F05 |
| AP4 | 276 | 304 | 125 | 110 | 145 | 20 | 50 | 58 | 19 | 14 | - | 80 | 30 | 55 | 20 | 3.5 | 17/22** | M8/M10 | 70/102 | 1/4" | F07/F10 | - |
| AP4.5 | 310 | 350 | 142 | 128 | 172 | 30 | 58 | 69 | 28 | 20 | 130 | 80 | 30 | 70 | 24 | 3.5 | 17**/22 | M10 | 102 | 1/4" | F10 | F07 |
| AP5 | 366 | 405 | 155 | 140 | 185 | 30 | - | - | 28 | 20 | 130 | 80 | 30 | 70 | 24 | 3.5 | 17**/22 | M10 | 102 | 1/4" | F10 | F07/F12 |
| AP5.5 | 388 | 442 | 176 | 160 | 206 | 30 | - | - | 36 | 28 | 130 | 80 | 30 | 85 | 29 | 3.5 | 22**/27 | M12 | 125 | 1/4" | F12 | F10 |
| AP6 | 468 | 500 | 200 | 175 | 230 | 30 | - | - | 36 | 28 | 130 | 80 | 30 | 85 | 29 | 3.5 | 22**/27 | M12 | 125 | 1/4" | F12 | F10 |
| AP8 | 563 | 612 | 250 | 215 | 300 | 50 | - | - | 48 | 32 | 130 | - | 30 | 100 | 38 | 5 | 27**/36 | M16 | 140 | 1/4" | F14 | F12 |
| AP10 | 750 | 838 | 335 | 290 | 385 | 50 | - | - | 48 | 32 | 130 | - | 30 | 130 | 50 | 5 | 36**/46 | M20 | 165 | 1/4" | F16 | F14 |

ITORK Electrical Motor Actuator

ITQ020:-



| | |
|---------------------------------|--|
| Enclosure | IP66, O-ring Sealed |
| Main Power | Free Voltage (110/220VAC/1Ph/50/60Hz) 24V AC/DC |
| Duty cycle(on-off) | S2 : 50% |
| Motor | DC motor |
| Limit switches | 1 ea for Open & Close (5A, 250VAC) |
| Extra Limit switches | Relays for Open & Close (5A, 250VAC) |
| Mounting | ISO F03, 9 X 9 - DP12 Square female Shaft |
| Travel angle | 90°C ± 5°C |
| Cable entry & Wiring | 1-PG11 Cable gland with wires 30cm long |
| Surface protection | Polyester coating |
| Ambient temperature | -10°C ~ + 65°C |
| Humidity(R.H) | 90% |

ITQ040:-

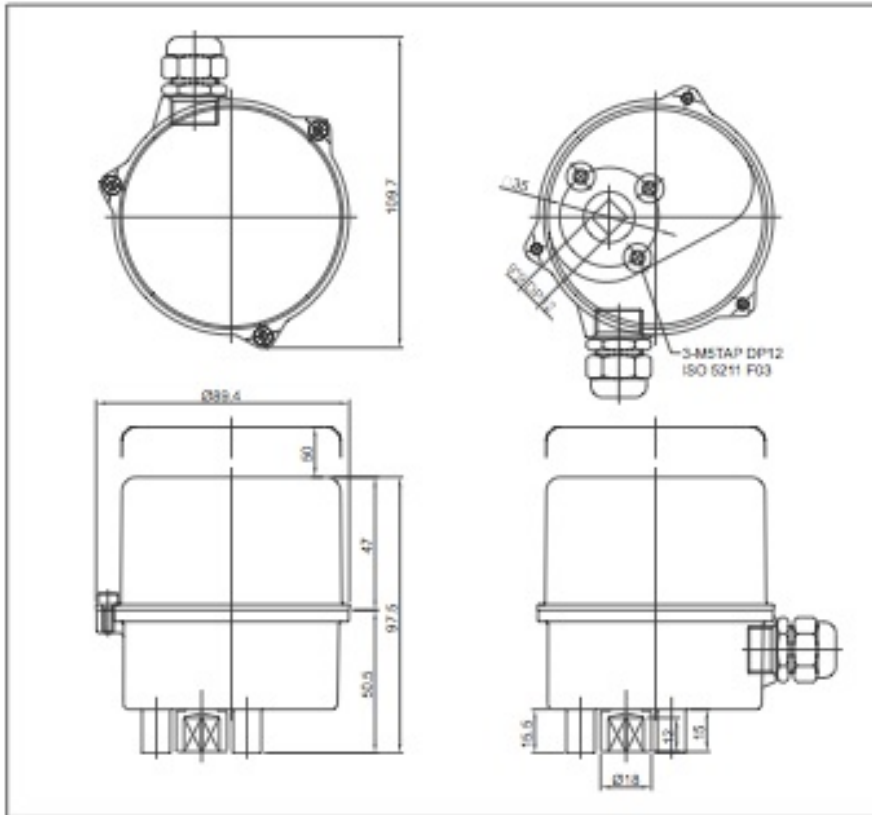
ITQ080:-

| | |
|----------------------------|--|
| Enclosure | IP66, O-ring Sealed |
| Main Power | 110/220VAC/1Ph/50/60Hz, 24V DC |
| Control power | 110/220VAC/1Ph/50/60Hz |
| Duty cycle(on-off) | S2 : 50%, max 30minutes |
| Motor | Induction motor |
| Limit switches | 1 ea for each travel (No extra switch) |
| Space heater | 2W |
| Manual operation | Extruded shaft on bottom |
| Indicator | Continuous Mechanical position indicator |
| Mounting | ISO F03 & F05 flange with double square female shaft |
| Travel angle | 90° ± 10° |
| Cable entries | 2 - PG 13.5 |
| Terminal block | Spring loaded push type |
| Surface protection | Anodized polyester coating |
| Ambient temperature | -20°C--+70°C |
| Humidity(R.H) | 90% |

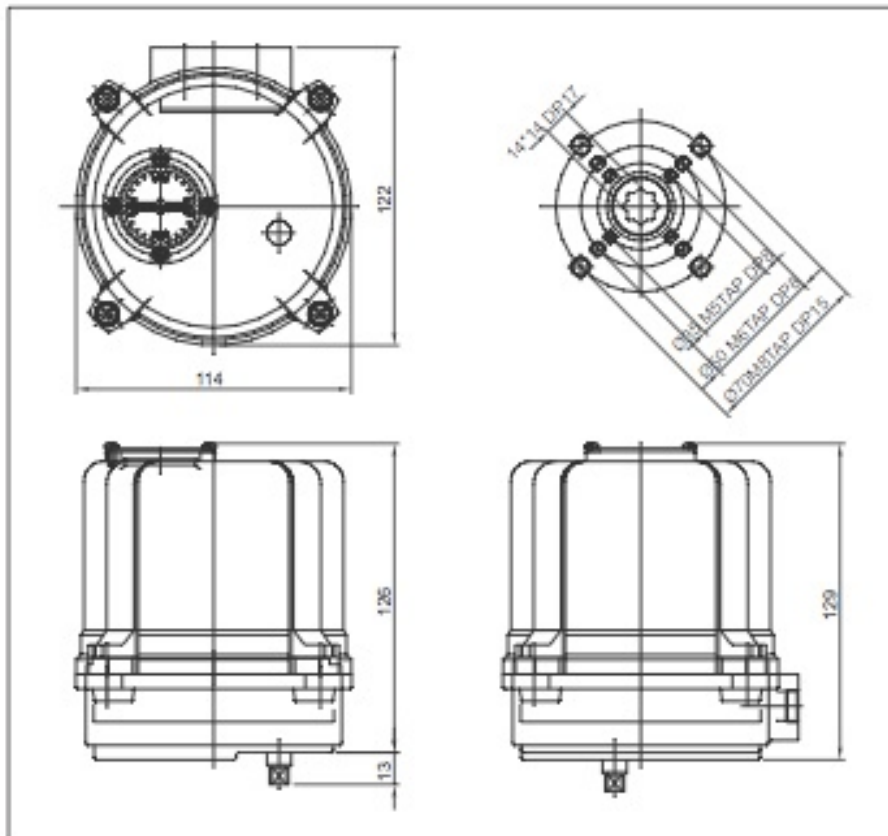
| | |
|-------------------------------|---|
| Enclosure | Weatherproof IP67, O-ring sealed |
| Main Power | 110/220VAC/1Ph/50/60Hz, 380/440VAC/3Ph/50/60Hz, 24VDC |
| Control power | 110/220VAC/1Ph/50/60Hz |
| Duty cycle(on-off) | S2 : 40%, Max 30 minutes |
| Motor | S4, 50%, 1200 start/Hour |
| Duty cycle(modulating) | Induction motor |
| Limit switches | 2 ea for each travel end (1 each as dry contact) |
| Space heater | 3W |
| Manual operation | By wrench (M6) directly to the worm gear |
| Indicator | Continuous Mechanical position indicator |
| Mounting | ISO F05 & F07 flange with double square female shaft |
| Self locking | By means of worm gearing |
| Travel angle | 90° ± 10° by external adjustable mechanical stopper |
| Cable entries | 2 - M20 X 1.5 (option : 2- PF1/2") |
| Terminal block | Spring loaded push type |
| Surface protection | Anodized & polyester coating |
| Ambient temperature | -20°C--+70°C |
| Humidity(R.H) | 90% |

ITORK Electrical Motor Actuator

ITQ20:-

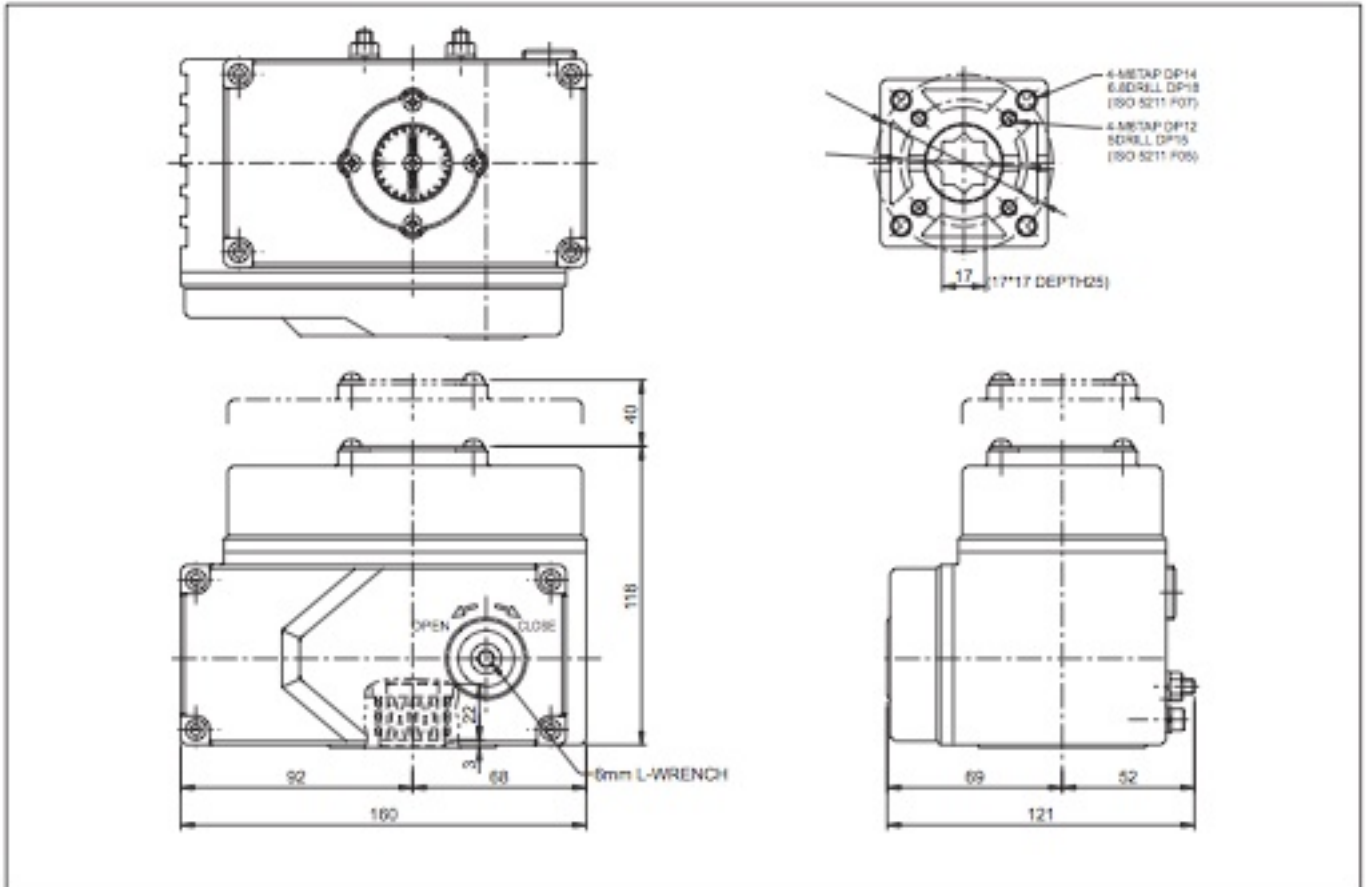


ITQ40:-



ITORK Electrical Motor Actuator

ITQ80:-



UNI-D Motorized Actuator

General Description

1. UM-1 to UM-6 provide direct mounting on ISO 5211 Valve.
2. UM series is low power consumption, high efficiency and excellent weatherproof heavy-duty motor.
3. All the joint on the housing are armed with waterproofing seal(IP67), which is applicable for use in outdoor environment.
4. Stabilized start speed to effectively avoid water hammering for prolonging the service life tubes.
5. The UM series have continuous mechanism position indication.
6. All UM series provide thermal protector.

Standard Voltage

100VAC ~ 120VAC

200VAC ~ 250VAC

24VDC or other special voltage

Enclosure

1. IP67 waterproof and dustproof enclosure.
2. Made of "AA"NYLON or Aluminum Alloy which has purpose of resisting against heat, acid, alkali, waterproof, dustproof.

Cautions

1. Electric actuator away from the area using gas or chemical substance which is vulnerable to gas explosion to avoid the occurrence of hazard.
2. Be sure to voltage and wiring is correct.
3. The inner part have to clear before installed.
4. Adjusting valve position, open cover then adjusting the CAM (Hexagonal head wrench 2.5H). After complete adjusting, be sure to screw is tight.
5. Prohibition drive the valve when the valve lock.

Valve

UM series provide mounting on ISO 5211 valve or non ISO 5211 valve.

Option

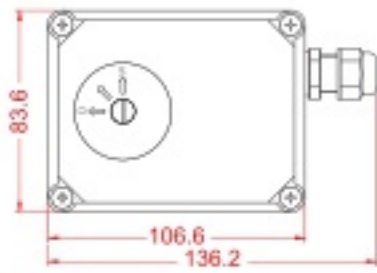
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|--------------------------|---------------------------|------------------|----------|
| 1. Temp controller | 2. Limit switch (2 units) | 3. Heater | 4. Relay |
| 5. Modulating controller | 6. Modulating control box | 7. Local Control | |

Approvals

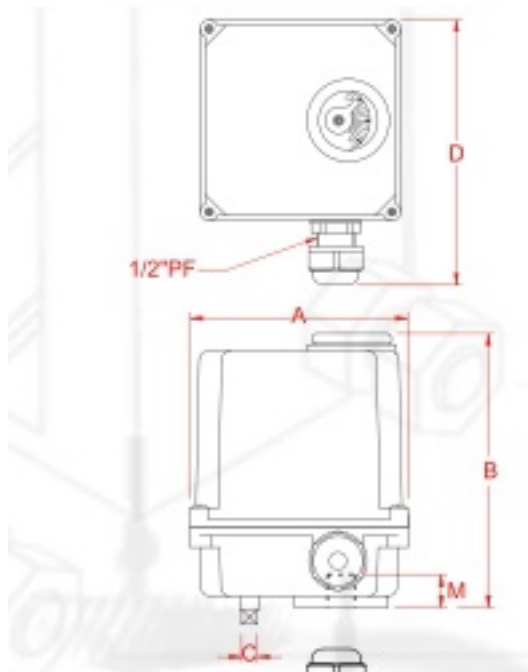
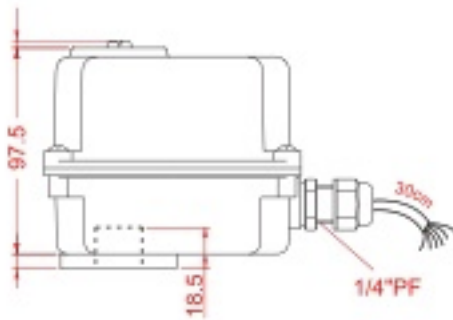
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|------------|---------|--------|
| • ISO 9001 | • CSA | • IP67 |
| • CE | • UL429 | |



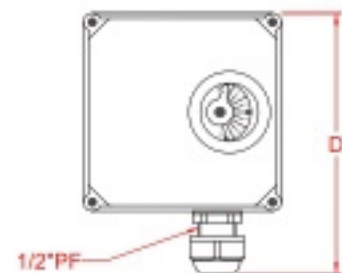
UNI-D Motorized Actuator



UMS:-



UM1:-



UM2:-

