

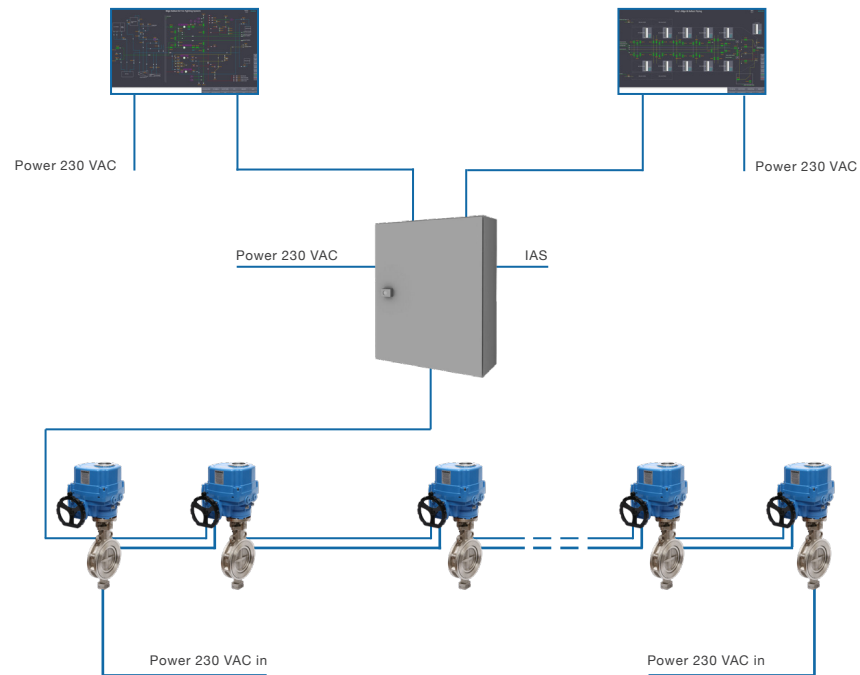
Electric Actuator

UED

Introduction

UED Series Explosion-proof electric actuator is used for controlling quarter turn of the butterfly valve, ball valve and other types valve and max 0°-270° rotation. It widely applies to marine industry as well as the other fields like petroleum, chemical, water treatment, paper making, power plant and etc. It can be driven by AC power or DC power, accept control signal of digital on/off or analog 4-20mA or 0-10V DC voltage signal and the bus control as option. It moves the valve to the right position by automatic control and the manual handwheel in emergency with maximum output torque 3000NM.

System overview



Performance

Actuator Enclosure

The anodized aluminum enclosure with powder coating is highly corrosion-resistant and explosion-proof. Standard with IP67 protection and IP68 available as option.

Motor

Fully enclosed squirrel-cage motor with compact size, large torque, little inertia force and F class insulation rating. Built-in overheat protection switch avoids damaging of the motor.

Manual Handwheel

The compact and convenient handwheel would be used to operate the valve on/off when the actuator power off. Pulling the clutch to right side and then the handwheel could be operated. When the actuator power on the clutch would return to left side automatically.

Position Indicator

Installed on the top center for observing the position of valve. The convex lens design avoid condensation of the water.

Heater and Thermostat

To heat the actuator space in cold environment which let the actuator workable at a wide temperature range and protect the motor and the parts out of the damage.

Limit Switch

Both mechanical and electronic limit switch equipped. Mechanical limit screw is adjustable, safe and reliable.

Electronic limit switch SPDT controlled by the cam. Position of limit switch can be set accurately and conveniently by an easy adjustment.

Torque Switch

The built-in and preset torque switch provides overload protection (Except type UED-050/100) and to make the the valve and actuator out of damage by cutting off the power supply automatically when the valve is jammed.

Long Life and Maintenance Free

Precise worm gear transfer large torque efficiently with low noise (max. 50 dB) and long life. The self-lock function prevents inversion and insure stability and reliability. High effective lubricant oil has been filled in before the actuator dispatch which keep the actuator running during the life circle.

Installation

The flange fitting the valve at the bottom of Electric Actuator meets ISO5211 and DIN3337 standard. The actuator can be installed vertically or horizontally.

Analog Signal and Bus Control

The analog signal and bus control offered by a separate module attached to the actuator by fixing screw with inner cable tunnel. Such design would be help for the control part out of the motor heat and electric interference.

Fail Safe

UED Series supply fail safe function as option that the actuator would be driven by a built-in battery to operate the valve open or close when the power off.

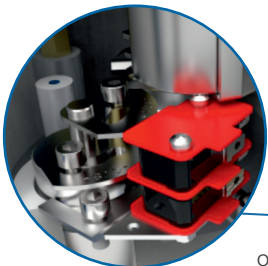
UED series explosion-proof electric actuator

Manual Clutching Handle



- The handle used to shift to manual clutching at emergency operation
- Back to auto operation mode automatically when the actuator power on

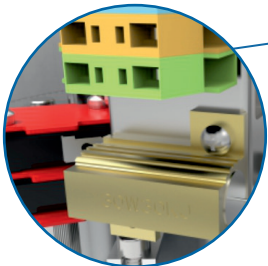
Cam and Limit Switch



- Easy setting by two screws
- Each cam could be set separately
- The cam position would be kept once the setting done

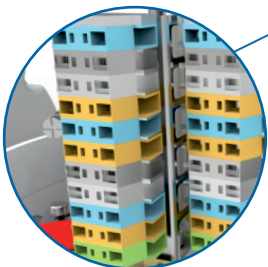
Option Part for analog control

Space heater

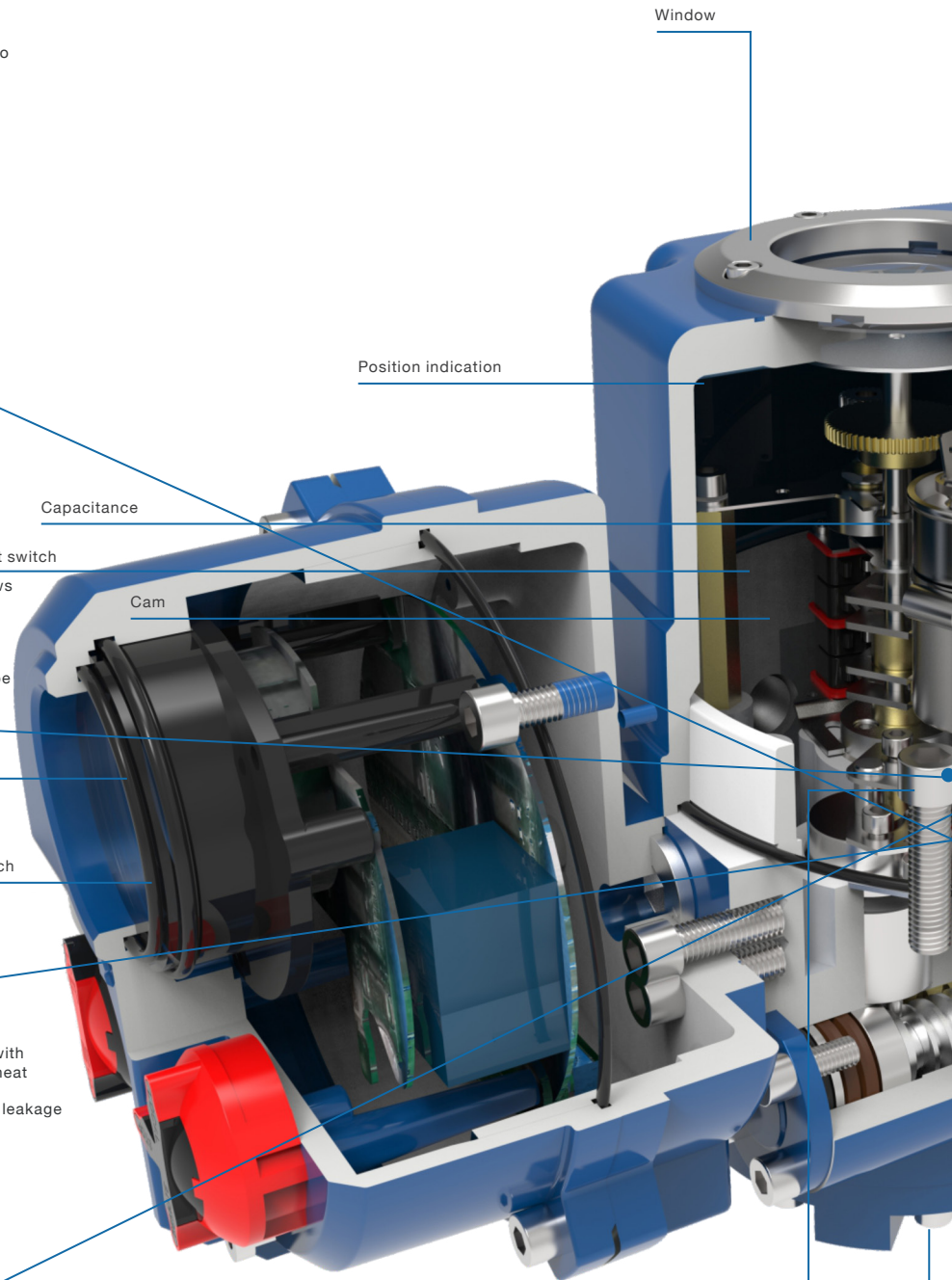


- 7-10W, ceramic housing with thermostal to prevent overheat
- Without risk of electricity leakage

Terminal block



- Enough terminal for customer's convenience (Max 22 points)
- Proven reliability and tight wiring connection
- Terminal length: 8-9mm/(2.5mm³)
- Terminal dimension: 10x22x32mm



Window

Position indication

Capacitance

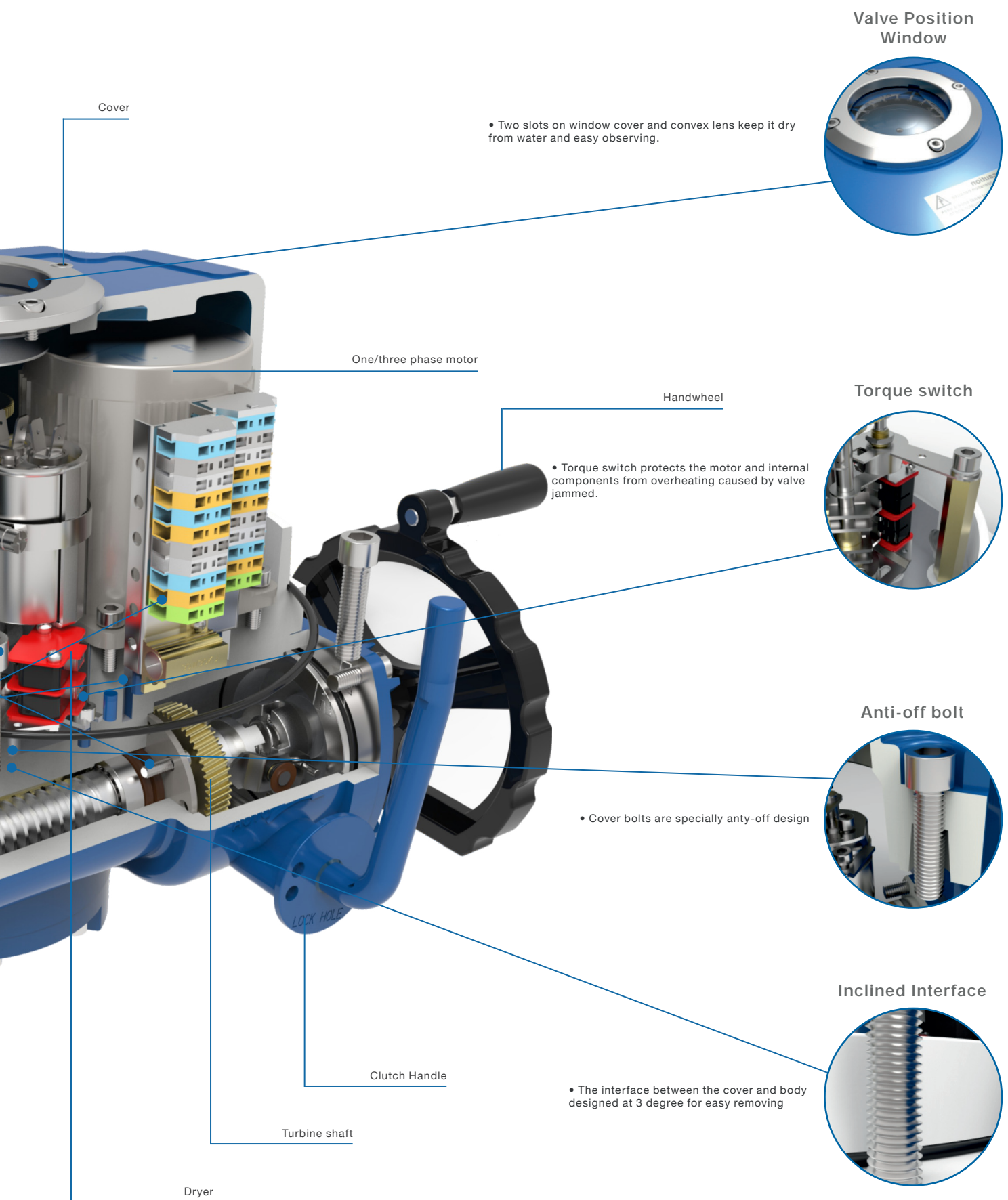
Limit switch

Cam

Rotary Switch

Valve fitting flange, ISO5211 standard

Torque Switch System



API Marine | UED



Model	A	B	C	D	E	F	G	R	O	P	O1	P1	Q×H
UED-050	142	58	177	237	157	67	110	90	70	4-M8	—	—	14×14
UED-100	142	58	177	237	157	67	110	90	70	4-M8	—	—	14×14
UED-200	142	80	275	272	227	94	155	125	102	4-M10	70	4-M8	17×17
UED-600	142	82	276	289	243	96	155	150	125	4-M12	102	4-M10	27×27
UED-1200	142	115	288	331	276	103	205	180	140	4-M16	125	4-M12	36×36
UED-2000	142	115	288	331	276	103	205	180	140	4-M16	125	4-M12	46×46
UED-3000	142	115	288	331	276	103	205	180	140	4-M16	125	4-M12	46×46

Electric Actuator

Standard Technical Parameter

Performance Parameter

ModelL	Max output torque	Operating time 60/50HZ	MAX bore size	F-class Motor	(A) 50Hz Rated Current (A) 50HZ				Handwheel	Weight
					Single Phase		Three Phase			
	N-M	90°	mm	W	110V	220V	380V	440V	N	kg
UED-050	50	18/22	Φ20	20	1.10	0.5	0.1	N/A	10	7.5
UED-0100	100	18/22	Φ22	20	1.10	0.5	0.1	N/A	10	7.5
UED-0200	200	21/25	Φ22	60	1.6	0.85	0.4	0.30	11	17.3
UED-0600	600	26/31	Φ35	120	3.65	1.6	0.78	0.59	13.5	23
UED-1200	1200	31/37	Φ45	180	4.20	2.5	1.35	0.81	16.5	29
UED-2000	2000	93/112	Φ65	180	4.10	2.5	1.35	0.79	49.5	75
UED-3000	3000	93/112	Φ65	180	4.10	2.5	1.35	0.79	49.5	75

Dimensions and Connection(mm)

Actuator Enclosure	Protection IP67	Optional: IP68,explosion-proof
Motor	Squirrel-cage Asynchronous Motor	
Limit Switch	1 Close&1 Open, SPDT, 250VAC 10A	
Auxiliary Switch Set	1 Close&1 Open, SPDT, 250VAC 10A	
Torque Switch	1 Close&1 Open, SPDT, 250VAC 10A	
Stroke	90°±10°	Optional: 0°- 270°
Failure Protection /Operating Temperature	Internal thermal protection, Open 115°C±5°C /Close 97°C ±5°C	
Indicator	Continuous position indicator	
Manual Operate	Mechanical clutch, operate with handwheel	
Self-lock Device	Self-lock by worm and worm gear	
Mechanical Limit	External adjusting bolts (2 piece)	
Heater and Thermostat	7-10W (110/220V AC)	
Connecting hole	PF 3/4"(2 pieces)	
Ambient Temperature	-20°C~+70°C	
Lubrication	Aluminum-base grease(EP type)	
Material	Steel, Aluminum alloy, Aluminum bronze, Polycarbonate	
Ambient Humidity	Max 90% RH	
Anti-vibration	X Y Z 10g,0.2-34HZ,30minutes	
External Coating	Dry powder, Epoxy polyester	



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API Marine is certified according to ISO 9001:2015

We want to contribute to our customer's profitability by supplying high quality products, excellent service and state-of-the-art high-tech solutions, where reliability and durability are keywords!

