



## EUKST SERİSİ UNOX EX PROOF ELEKTRİKLİ AKTÜATÖR

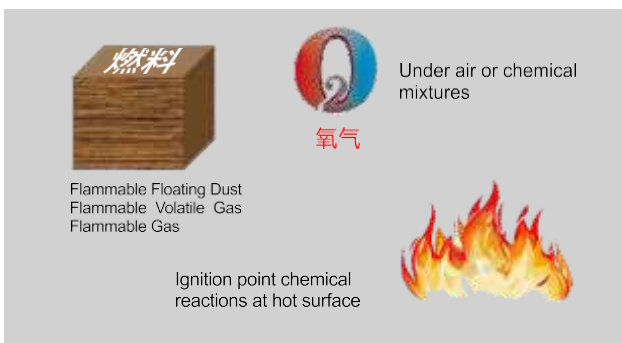


## Model compilation

KSTB-05 A-DC24V-20S-1-H

- ⑦ Optional Function: H Over-torque protection, R De-humidity Heater
- ⑥ Control Signal: 1) 4-20mA, 2) 1-5V, 3) 0-10V
- ⑤ Open Close Time: 20S/30S/45S/60S
- ④ Power / Voltage: DC24V/AC24V/AC110V/AC220V/AC380V
- ③ Wiring Type: B/S/K/R/A/D/H/T
- ② Actuator Model: 05/10/20/40/60
- ① KSTB is Explosion-proof Series

## Explosion-proof Concept



### I. Explosion requires three conditions:

(1). Explosive Substance: It can react with oxygen (air) what includes gas, liquid and solid.

(Gas: hydrogen, acetylene, methane, etc. Liquid: ethanol, gasoline, etc. Solid: dust, fiber dust, etc.)

(2). Air or Oxygen

(3). Ignition Sources: Open fire, electrical spark, mechanical spark, electrostatic spark, high temperature, chemical reaction, luminous energy, etc.

**Explosive Substance:** Many workplace will produce some explosive substances. About two-thirds of the sites in coal mines contain explosive substances; in the chemical industry, more than 80 percent of the production plant area contains explosive substances.  
**Oxygen:** Oxygen in the air is ubiquitous.

**Ignition Sources:** In the production process, a variety of friction spark, mechanical wear sparks, static sparks, high temperature and so on are unavoidable when extensive use of electrical instruments, especially when the instrument, electrical breakdown.

### What is explosion-proof ?

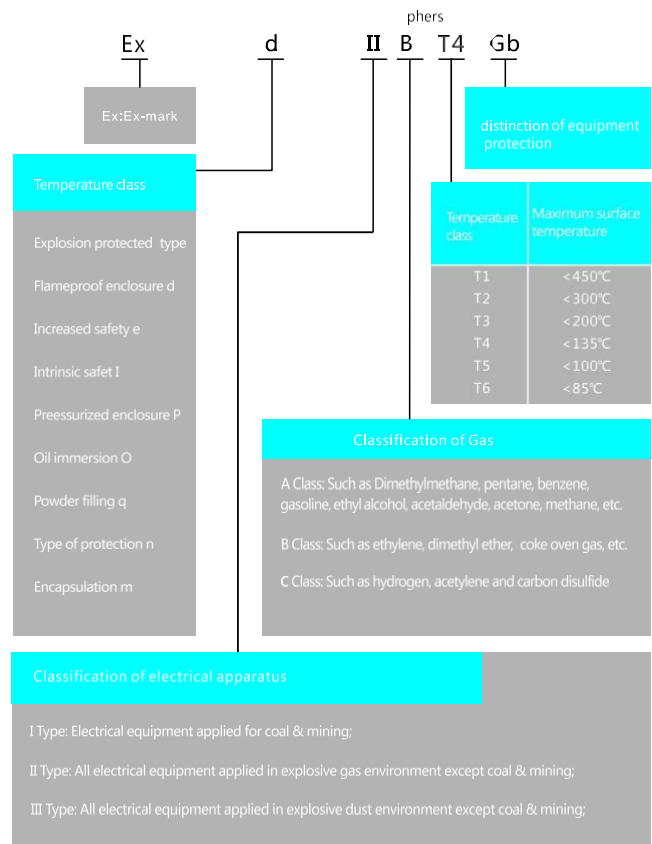
II. Explosion-proof: To prevent the explosion must take the three necessary conditions into consideration. The explosion will be limited when limiting one of the necessary conditions.

In the industrial process, usually dealing with flammable and explosive situations from the following three aspects:

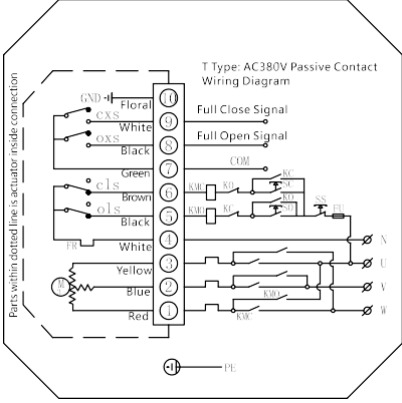
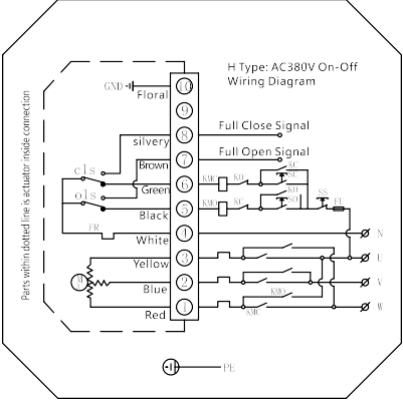
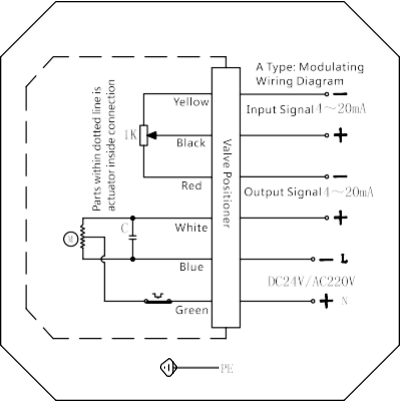
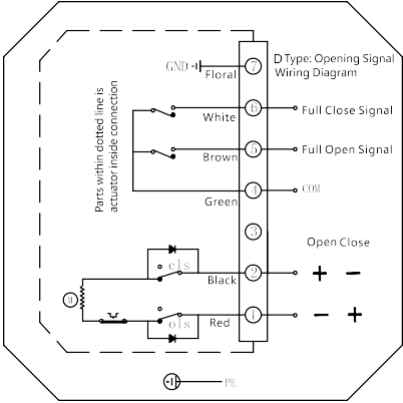
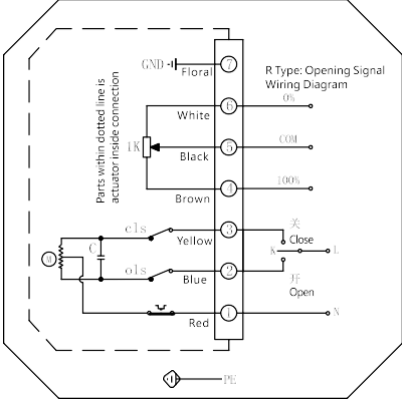
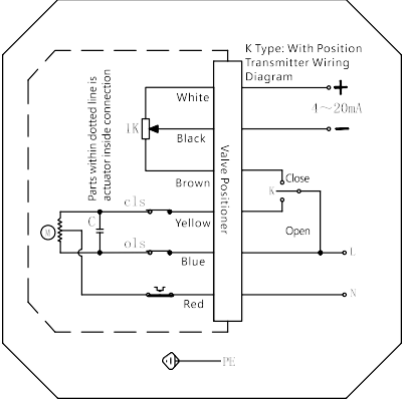
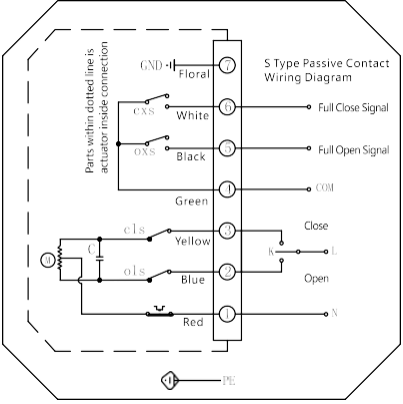
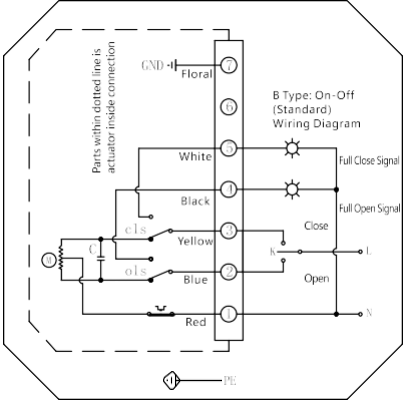
- (1) Prevent or minimize the possibility of leakage of flammable substances.
- (2) Don't use or minimize the use of electrical components easy to produce electrical spark.
- (3) Nitrogen gas inflating to maintain the inert state of the method.

### Ex-mark

Ex-mark of electrical apparatus for explosive gas atmos



# Control Circuit



## Performance characteristics

**1. Body:** Body material is hard aluminum alloy, which is treated by hard anodic oxidation and coated by Polyester powder, so that it has great corrosion resistance and protection class is Ip67;

**2. Motor:** Fully enclosed cage type motor is small in size and inertia, large in torque. Insulation class is F grade which can prevent motor over-heating;

**3. Manual Structure:** Small handle is reliable, energy-saving. It can be used for manual operation when electricity is off; In automatic operation, it can be fixed inside the clip for easy operation;

**4. Indicator:** Indicator is assembled on center axis, valve position can be observed; Outside mirror design facilitates position observation and prevents water drops accumulation;

**5. Enclosure:** High sealing performance, standard protection class is Ip67;

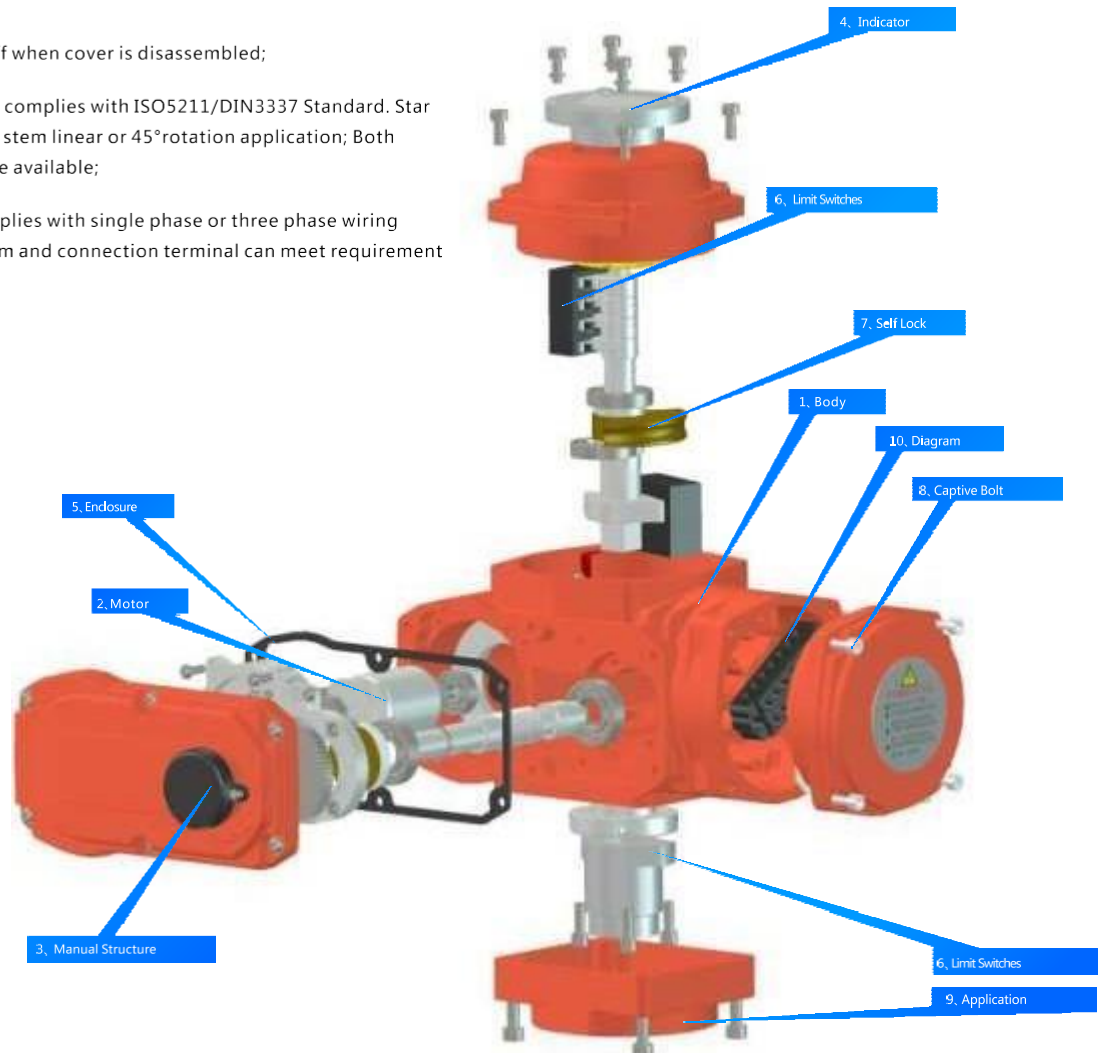
**6. Limit Switches:** Mechanical and electronic position limit switches. Mechanical stop screw can be adjustable; Electronic limit switches can be controlled by cam. Position can be set easily and accurately by simply adjusting the cam without any influence by handle;

**7. Self Lock:** Accurate turbo-worm structure can output large torque with high efficiency and little noise ( Max. 50decibel). Service life is quite long; Its self lock function can stop reverse rotation. Drive part is stable and reliable without additional lubrication;

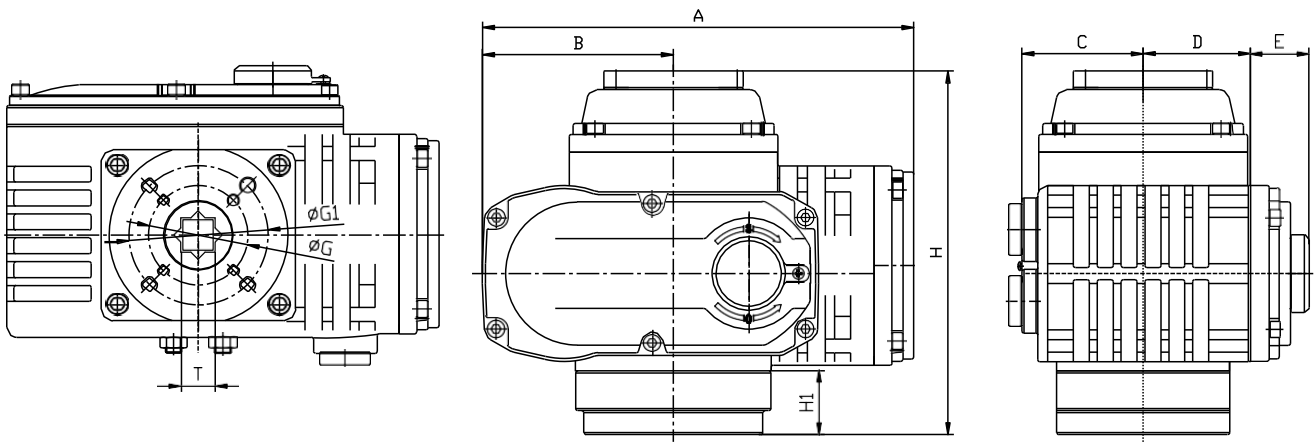
**8. Captive Bolt:** Bolts won't fall off when cover is disassembled;

**9. Application:** Bottom connection complies with ISO5211/DIN3337 Standard. Star square hole is easy for square valve stem linear or 45°rotation application; Both vertical and horizontal assemble are available;

**10. Diagram:** Control diagram complies with single phase or three phase wiring standard, reasonable wiring diagram and connection terminal can meet requirement of other optional functions.



## Dimension of Explosion-Proof Electric Actuator



Model	A	B	C	D	E	G	G1	H	H1	T
KSTB-05	170	83	53	46	21	36/50	70	150	30	14
KSTB-10/20	217	96	61	53	25	50	70	182	32	17
KSTB-40/60	266	122	74	64	32	70	102	213	48	22

## KSTB-05 Exd-proof Type Performance Parameter

Parameters	Model				
	DC24V	AC24V	AC110V	AC220V	AC380V
Motor Power	12W	13W	13W	13W	13W
Rating Current	0.8A	1.5A	0.24A	0.3A	0.07A
Standard Time / Torque	20S/50Nm				
Rotation Angle	0~90° Adjustable				
Available Wiring Type	B Type/S Type/K Type/R Type/D Type/A Type/H Type/T Type				
Unit Weight	34 kg				
Insulation Resistance	DC24V/AC24V: 100MΩ/250VDC AC110V/AC220V/AC380V: 10CMΩ/500VDC				
Voltage Resistance Class	DC24V/AC24V: 500VAC 1分钟、AC110V/AC220V:1500VAC 1分钟、AC380V:1800VAC 1分钟				
Protection Class	IP67				
Exd Class	Exd II BT4Gb				
Assemble Direction	360° Any Available Direction				
Cable Connection	Explosion-proof Gland, suitable explosion-proof cable connection shall be added according to user' s cable				
Ambient Temp.	-20℃ ~+60℃				
Optional Function	De-humidity Heater				

### KSTB-10/20 Exd-proof Type Performance Parameter

Parameters	KSTB-10					KSTB-20				
	DC24V	AC24V	AC110V	AC220V	AC380V	DC24V	AC24V	AC110V	AC220V	AC380V
Motor Power	25W	25W	25W	25W	15W	25W	40W	40W	40W	30W
Rating Current	2.0A	2.2A	0.5 A	0.35A	0.15A	3.0A	2.5A	0.75A	0.6A	0.2A
Standard Time / Torque	30S/100Nm					30S/200Nm				
Rotation Angle	0~90° Adjustable									
Available Wiring Type	B Type/S Type/K Type/R Type/D Type/A Type/H Type/T Type									
Unit Weight	6.0kg					6.0kg				
Insulation Resistance	DC24V/ AC24V: 100M $\Omega$ /250VDC AC110V/AC220V/AC380V: 100 M $\Omega$ /500VDC									
Voltage Resistance Class	DC24V/ AC24V: 500VAC 1分钟、AC110V/AC220V:1500VAC 1分钟、AC380V:1800VAC 1分钟									
Protection Class	IP67									
Exd Class	Exd II BT4 Gb									
Assemble Direction	360° Any Available Direction									
Cable Connection	Explosion-proof Gland, suitable explosion-proof cable connection shall be added according to user' s cable									
Ambient Temp.	-20℃ ~ +60℃									
Optional Function	◆ Over torque protection ◆ De-humidity Heater									

### KSTB-40/60 Exd-proof Type Performance Parameter

Parameters	KSTB-40					KSTB-60				
	DC24V	AC24V	AC110V	AC220V	AC380V	DC24V	AC24V	AC110V	AC220V	AC380V
Motor Power	70W	80W	80W	80W	60W	70W	80W	80W	80W	40W
Rating Current	2.5A	9.0A	2.2A	0.8A	0.48A	2.5A	9.0A	2.2A	0.8A	0.5A
Standard Time / Torque	30S/400Nm					45S/600Nm				
Rotation Angle	0~90° Adjustable									
Available Wiring Type	B Type/S Type/K Type/R Type/D Type/A Type/H Type/T Type									
Unit Weight	11.5kg					11.5kg				
Insulation Resistance	DC24V / AC110V/AC220V/AC380V: 100 M $\Omega$ /500VDC									
Voltage Resistance Class	DC24V / AC110V/AC220V:1500VAC 1分钟、AC380V:1800VAC 1分钟									
Protection Class	IP67									
Exd Class	Exd II BT4 Gb									
Assemble Direction	360° Any Available Direction									
Cable Connection	Explosion-proof Gland, suitable explosion-proof cable connection shall be added according to user' s cable									
Ambient Temp.	-20℃ ~ +60℃									
Optional Function	◆ Over torque protection ◆ De-humidity Heater									