

# NUTORK®

Actuators & Valves



CE SIL3 Ex

## NTE Series Quarter Turn Electric Actuator



Approved by:

SIL3 Approval

LVD - Low Voltage Directive 2006/95/EC

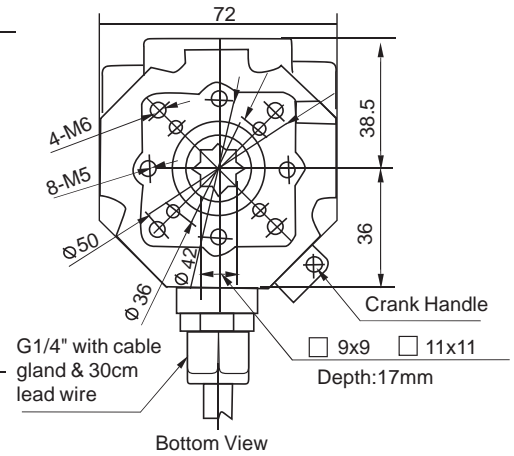
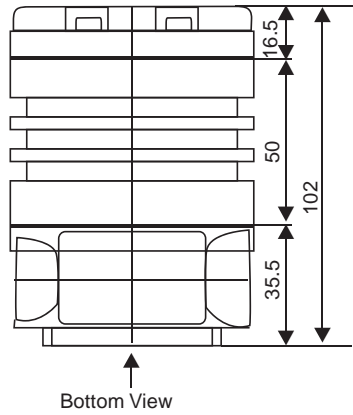
MD - Machinery Directive 2006/42/EC

EMC – Electromagnetic Compatibility Directive 2004/108/EC

## NUTORK CORPORATION

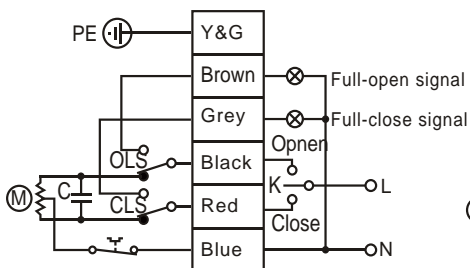


1. Due to characteristics of valve, the electric actuator must be able to provide high start up torque with full load whenever the valve is at open, closed or any other position. NUTORK NTE series electric actuators are designed for such working requirement.
2. Gear driving unit is made of alloy steel with heat treatment featuring high strength, excellent wear resistance and long term fatigue load impact.
3. The crank handle is designed as detachable to minimize the dimension of the actuator.
4. The integral construction of the wormgear and drive shaft provides long term dependable operation with high output torque.
5. The captive cover bolt prevents bolt from dropping when cover is opened.
6. The stainless steel stroke bolt and cam provide 0 - 90° adjustability.
7. The tempered glass visual position indicator provides anti-aging, temperature resistance and anti-deformation.
8. The epoxy encapsulated control servo unit provides heat insulation, moisture and dust proofing, thus suitable for various industrial process requirements.

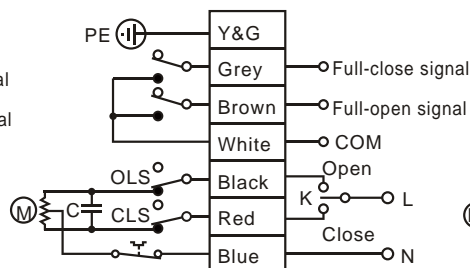


Model	NTE-02S			
Power	110/220VAC		24VDC	
Output Torque(Nm/in.lbs)	18/160	9/80	18/160	9/80
Operation Speed(sec.)	12	6	12	6
Power Consumption(W)	6		8	
Rated Current(A)	0.28	0.15	1.10	
Insulation Resistance	100MΩ@500VDC		100MΩ@250VDC	
Withstand Voltage	1500VAC@1 Min.		550VAC@1 Min.	
Thermal Protection	standard accessory, built-in, auto-reset type			
Mounting Direction	All directions			
Ambient Temp.	-30°C ~ +60°C			
Valve Connection	ISO5211, □9/11mm x F03/F04/F05			
Dimension(mm)	72(W) x 75(L) x 120(H)			
Enclosure	IP68			
Housing Material	Die-casting aluminum alloy			
Weight(Kg/Lbs)	1.2/2.65			

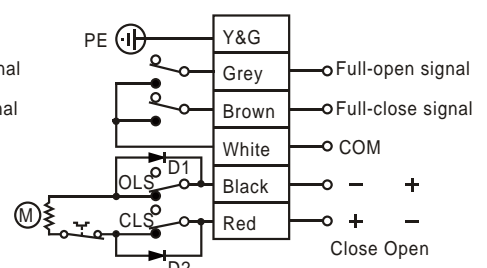
### Wiring Diagram



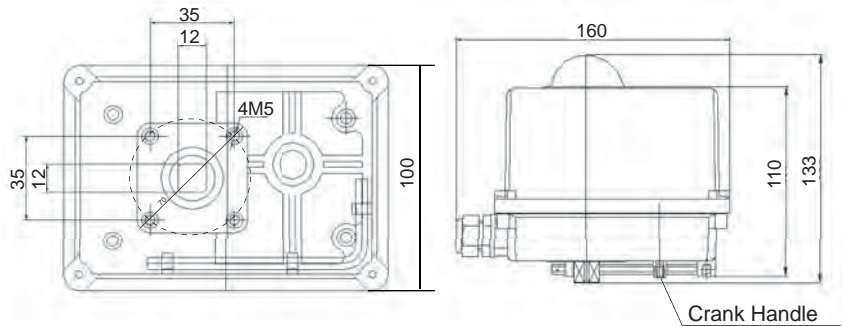
Type:A



Type:B

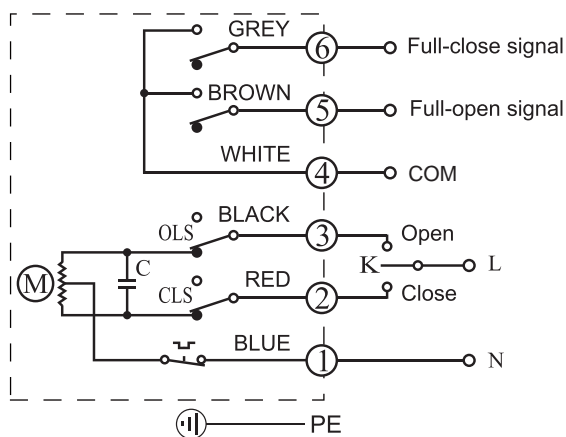


Type B: 24VDC

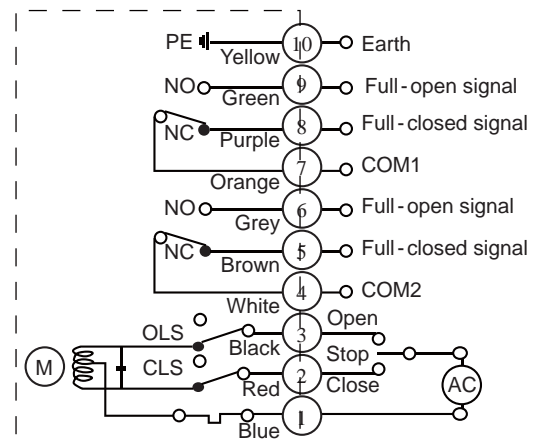


Model	NTE-02L		
Power	24VAC	110VAC	220VAC
Output Torque	25Nm(222in.lbs)		
Operation Speed(sec.)	10 sec.		
Power Consumption(W)	20W	18W	18W
Rated Current(A)	1.1	0.2	0.1
Insulation Resistance	100MΩ@500VDC		
Withstand Voltage	1500VAC @ 1 min		
Thermal Protection	Standard accessory , built-in ,auto-reset type		
Mounting Direction	All Direction		
Ambient Temperature	-30°C ~ +60°C		
Valve Connection	12x12x12mm square drive shaft x F05		
Dimension(LxWxH),mm	160(L)x100(W)x133(H)mm		
Enclosure	IP65		
Housing Material	ABS		
Weight(Kg)	1.4Kg		

### Wiring Diagram



**Type: B**



**Type: B1**

### Technical Data(NTE Series Electric Actuator)

Model	NTE-03	NTE-05	NTE-10	NTE-20	NTE-40	NTE-60	NTE-100	NTE-160	NTE-200	NTE-400	NTE-600
Output Torque(Nm)	30	15/30/50	50/60/100	80/100/150/200	150/250/300/400	600	300/800/1000	1600	2000	4000	6000
Operation Speed (Sec.)@0-90°/ 50Hz	20	10/20/30(std.)	15/20/30(std.)	9/15/20/30(std.)	9/15/20/30(std.)	30	15/30/50(std.)	100	100	100	150
Operation Angel(Max.)	0-360°	0-360°	0-90°	0-90°	0-90°	0-90°	0-90°	0-90°	0-90°	0-90°	0-90°
Valve Conn./ ISO5211	◇9/11-F03/F05 or ◇14-F05/F07		◇14/17-F05/F07	◇17/22-F07/F10	◇17/22/27-F07/F10			◇22/27 - F10/F12 or ◇36 - F14/F16		Bare Shaft	
Power (Watts)	DC motor	20	20	40	40	90	90	.....	.....	.....	.....
	AC motor	10	10	23	40	90	90	100	100	100	200
Rated Current 50HZ(A)	24VDC	2	2	2.4	3.8	8	8	9	.....	.....	.....
	110VAC	0.48	0.48	0.64	0.9	2	2	2.2	2.2	2.2	4.10
	220VAC	0.24	0.24	0.32	0.48	0.92	0.92	1	1.20	1.20	2.10
	380VAC	0.15	0.15	0.19	0.25	0.45	0.45	0.48	0.48	0.48	0.90
Weight-(Kg)	2.2	2.2	4	7	7.8	7.8	11.2	11.5	11.8	31	31
Duty Cycle (ON/OFF)	S2 : 35%, 10min. ~ 30min.										
Duty Cycle (Modulating)	S4 : 30~50%, 300~1200 Start/Hour										
Power Supply	1 Phase:110/220VAC±10%@50/60Hz, 3 Phase:380/440VAC±10%@50/60Hz, 12VDC.24VDC/VAC										
Stall Protection	standard accessory , built-in , auto-reset type										
Anti-Vibration	XYZ 10g , 0.2~34Hz , 10 minutes										
Ambient Humidity	90%RH Max.(non-condensing)										
Ambient Temperature	-30°C ~ +60°C										
Enclosure Rating	IP67(standard), IP68(option)										
Mounting Direction	All Directions										
Electrical Conduit	M20×1.5 with cable gland for standard type(2 - M20×1.5 with cable gland for modulating type)										
Manual Operation	Detachable Crank Allen-Key (standard accessory)										
Stopper	In operation : limit switches at full & closed position ; manual operation:mechanical stopper										
Housing Material	Die-casting aluminum alloy										
Various Option	1. Type A standard type										
	2. Type B additional limit switches (2xSPST) or Type B1 additional limit switches(2xSPDT)										
	3. Type C potentiometer unit ( 1KΩ or 5KΩ)										
	4. Type D potentiometer unit ( 1KΩ or 5KΩ) with additional limit switches (2xSPST)										
	5. Type E modulating controller (input signal : 4-20mA or 1-5VDC.output signal : 4-20mA)										
	6. Type F current position transmitter(output signal : 4-20mA)										
	7. H : Space heater										
	8. Torque switches(2 units)										
	9. Various mounting brackets										

### Different Function for NTE Series Electric Actuator:

1. With GREE/RED LED Dome Indicator



2. With Torque Switch, only available in NTE-10~NTE-60



3. With Handwheel



4. With Local Control Unit, 24VDC is not available

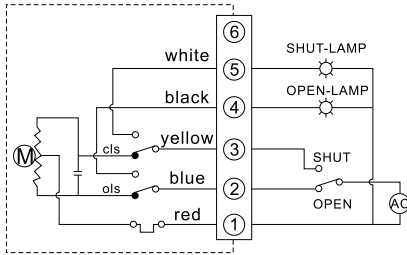


5. With Junction Box, only available in NTE-05~NTE-200



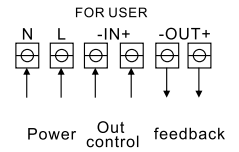
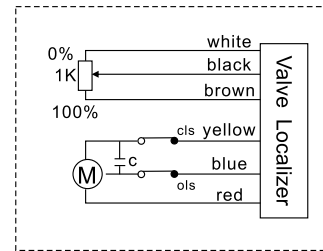
### Type A: Standard Type

Output Signal:  
2xSPST(NO) with  
line power switch



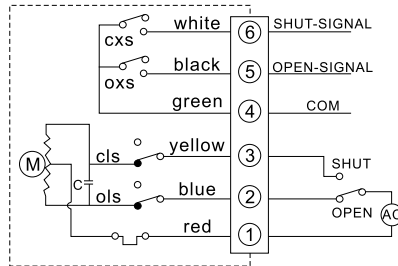
### Type E: Modulating Control

Input Signal:  
4-20mDC or 0-5VDC  
Output Signal:  
4-20mADC



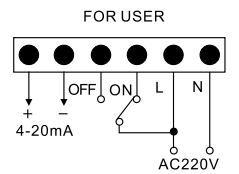
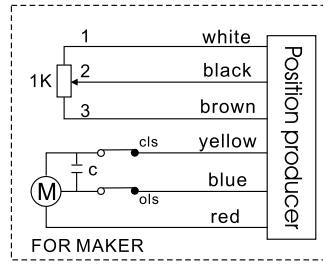
### Type B: 2xSPST(NO)

Output Signal:  
1xSPST(NO)  
micro-switch each at  
open & close position.



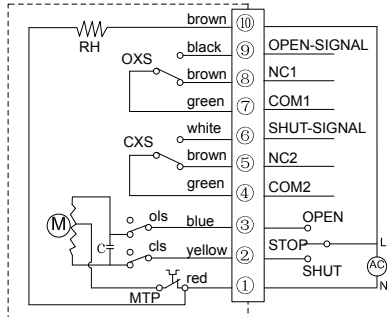
### Type F: R/I Converter

Output Signal:  
4-20mADC



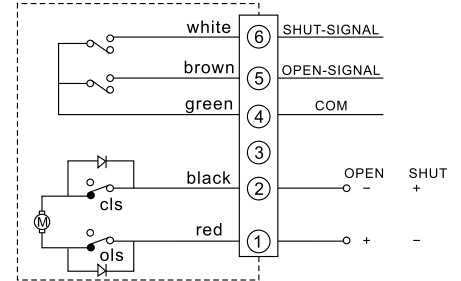
### Type B1: 2xSPDT(NO/NC)

Output Signal:  
1xSPDT(NO/NO)  
micro-switch each at  
open & close position



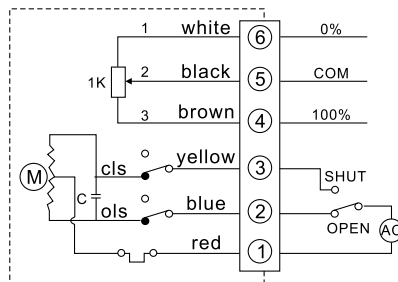
### DC Motor with 2xSPST(NO)

Output Signal:  
1xSPST(NO)  
micro-switch each at  
open & close position.



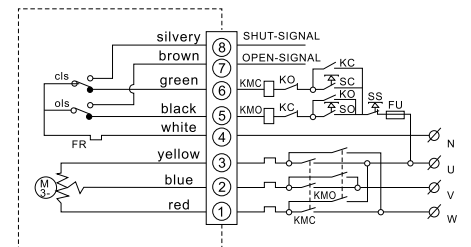
### Type C: Potentiometer

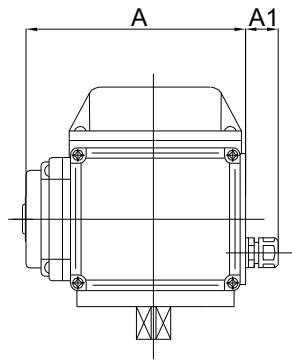
Output Signal:  
0-500Ω or 0-1000Ω



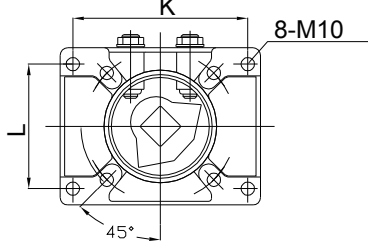
### 3 Phase, 380/415/440VAC Motor with 2xSPST(NO)

Output Signal:  
1xSPST(NO)  
micro-switch each at  
open & close position.

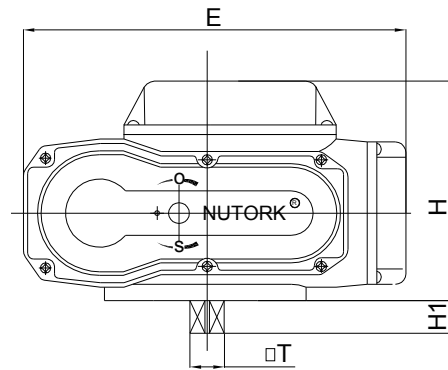




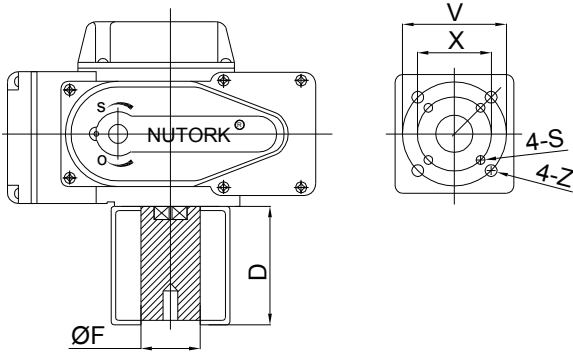
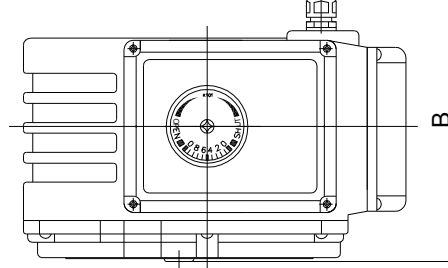
Bare Shaft



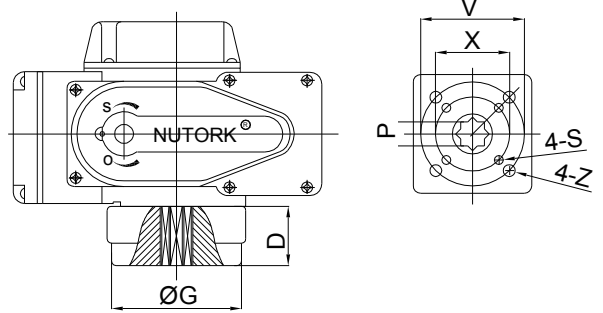
Bare Shaft



Bare Shaft



Bracket + Coupler

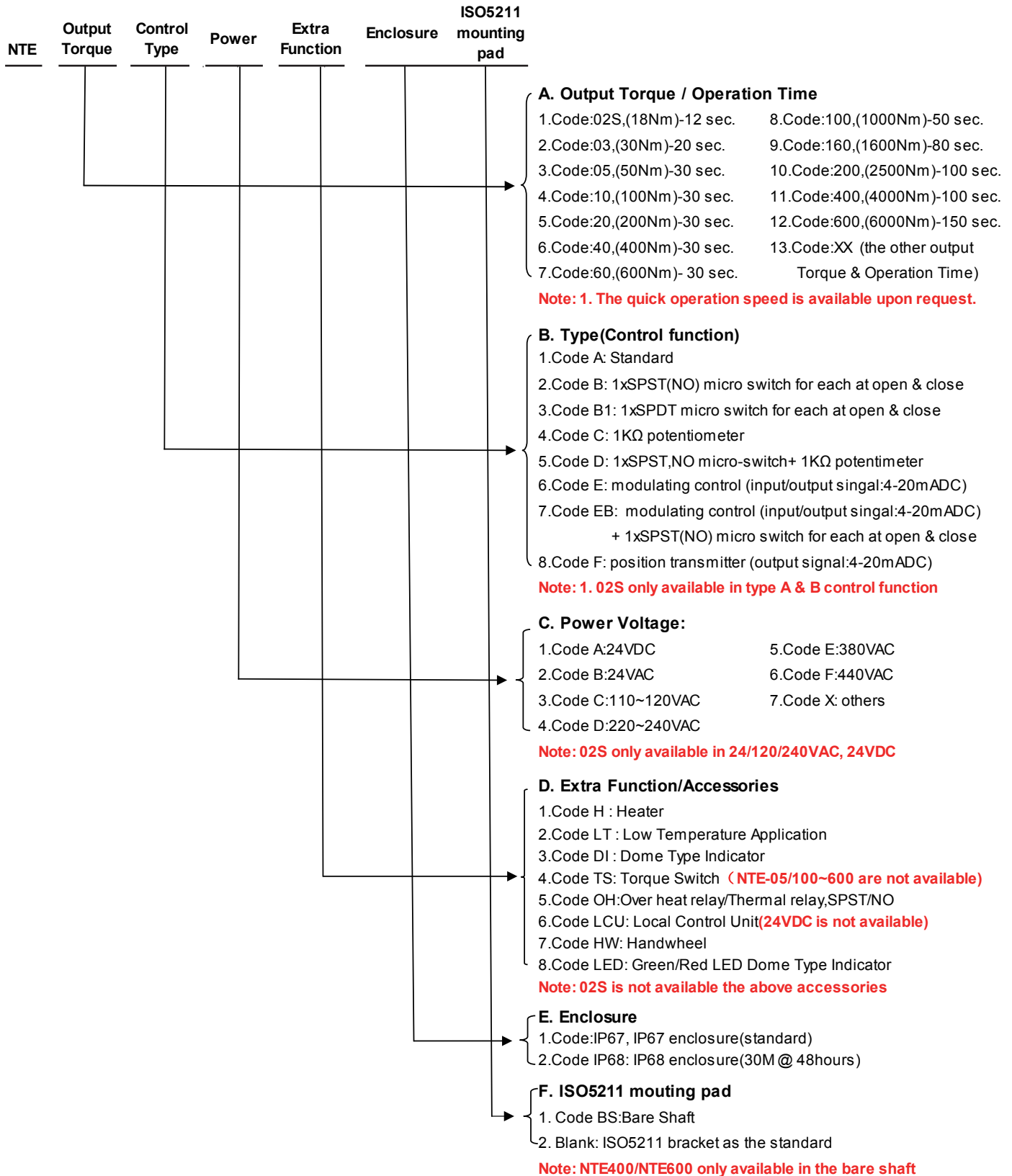


ISO5211

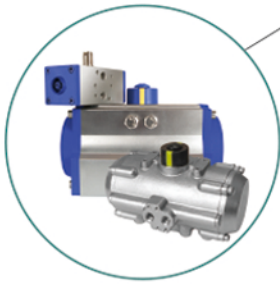
MM

Model	A	A1	E	H	H1	T	K	L	B	X	V	◇P	S	Z	ØG	ØF	D
NTE-03	115	22	160	103	12	12*12	68	60	138	36	50	9/11/14	4-M5	4-M6	70	28	Followed by Valve
NTE-05	115	22	160	103	12	12*12	68	60	138	36	50	9/11/14	4-M5	4-M6	70	28	
NTE-10	123	22	208	124	19	15*15	82	70	105	50	70	9/11/14	4-M6	4-M8	90	35	
NTE-20	148	22	258	148	22	23*23	118	84	178	70	102	14/17	4-M8	4-M10	125	48	
NTE-40	148	22	258	148	22	23*23	118	84	178	70	102	17/22	4-M8	4-M10	125	48	
NTE-60	148	22	258	148	22	23*23	118	84	178	70	102	17/22	4-M8	4-M10	125	48	
NTE-100	156	27.5	280	159	25	30*30	148	84	187	102	125	22/27	—	4-M10	135	65	
NTE-160	156	27.5	280	159	25	30*30	148	84	187	102	125	22/27	—	4-M10	135	65	
NTE-200	156	27.5	280	159	25	30*30	148	84	187	140	165	36	—	4-M16	175	65	
NTE-400	266	—	439	179	48	52*52	180	180	266	159	254	52	—	4-M18	—	—	
NTE-600	266	—	439	179	48	52*52	180	180	266	159	254	52	—	4-M18	—	—	

## Ordering Information



**NUTORK CORP.** manufactures a wide range of pneumatic actuators, electric actuators and the accessories of pneumatic actuator (limit switchbox, solenoid valve, manual override ---etc.) for quarter turn valves



Rack & Pinion Type Pneumatic Actuator.  
(Certificated by CE-ATEX/SIL3)  
Max. Output Torque: 9340Nm



Scotch Yoke Type Pneumatic & Hydraulic Actuator.  
(Certificated by CE-ATEX/SIL3)  
Max. Output Torque 293800Nm



NTQ Series Electric Actuator  
IP67/IP68(30M@24hrs)Enclosure & EExdIIBT6  
Max. Output Torque 6000Nm  
Approved by SIL3/IP68/MD/LVD/EMC.



NTE Series Electric Actuator  
IP67/IP68(30M@24hrs)  
Enclosure  
Max. Output Torque 6000Nm  
Approved by SIL3/IP68/MD/LVD/EMC.



Limit Switchbox IP67/IP68(50M@72hrs)  
Enclosure & EExdIIBT6/EExdII CT6/SIL3



Solenoid Valve 3/2NC & 5/2 Way, Static O-ring Sealing Design.  
Aluminum & 316SS Body  
IP67 & EExdIIBT6/EExdIICT6



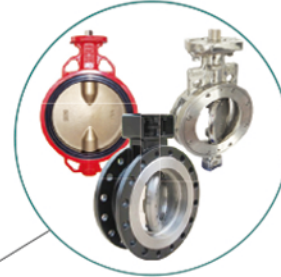
Air Filter Regulator Aluminum Body with Vinyl Paint & 316SS Body.  
Size: 1/4" ~ 1"



Manual Override Aluminum & Cast Iron & Ductile Iron Body  
Max Output Torque 70000Nm



Ball valve (Floating ball design), We can provide different pressure rating/ connection type/ operation mode.



Concentric Soft Seated Butterfly Valve  
High Performance Double Eccentric Butterfly Valve  
High Performance Triple Offset Metal Seated Butterfly Valve  
We can provide different pressure rating/ connection type/ operation mode.

## NUTORK Corp.

No.10, Lane 899, Zhuguang Road, Qingpu Area, Shanghai, China  
Tel:021-59887103/59888463/59888436, Fax: 021-59887203  
E-mail: nutork@nutork.com; Website: www.nutork.com