

# NUTORK<sup>®</sup>

Actuators & Valves

CE SIL3  EAC DNV

## NTE Series Quarter Turn Electric Actuator



Approved By:  
SIL3 Approval  
Low Voltage Directive 2014/35/EU  
Machinery Directive 2006/42/EC  
Electromagnetic Compatibility Directive 2014/30/EU

**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.

## Technical Data

Model		NTE-03	NTE-05	NTE-10	NTE-20	NTE-40	NTE-60	NTE-100	NTE-160	NTE-200	NTE-300	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	3000	4000	6000
Operational Speed (Sec.)@0-90°/50Hz		20	10/20/30	15/20/30	9/15/20/30	9/15/20/30	30	15/30/50	88	100	60	100	150
Operational Angles(Max.)		0-360°	0-360°	0-90°	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		27/36-F12/14/16	Bare Shaft	
Power (Watts)	DC motor	20	20	40	40	90	90	.....	.....	.....	.....	.....	.....
	AC motor	10	10	23	40	90	90	100	100	100	200	200	200
Rated Current (A)	24 VDC	2	2	2.4	3.8	8.0	9.5	9.0	.....	.....	.....	.....	.....
	110 VAC	0.48	0.48	0.64	0.9	2	2.06	2.2	2.2	2.2	3.9	4.10	4.10
	220 VAC	0.24	0.24	0.32	0.48	0.92	0.95	1.20	1.20	1.20	1.90	2.10	2.10
	380 VAC	0.15	0.15	0.19	0.25	0.45	0.46	0.48	0.48	0.48	0.90	0.90	0.90
Weight-(Kg)		2.2	2.2	4	7	7.8	7.8	11.2	11.8	11.8	20	31	31
Duty Cycle(On/Off Type)		S2: 50%~60min											
Duty Cycle (Modulating Type)		S4: 40%~1200 Start/Hour											
Power Supply		1.Phase:110/220VAC±10%@50/60Hz, 3Phase/380/440VAC±10%@50/60Hz, 12VDC.24VDC/VAC											
Thermal Protector		standard accessory, built-in, auto-reset type											
Anti-Vibration		XYZ 10g, 0.2~34Hz, 10min.											
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 handle (standard accessory)											
Stopper		In operation: limit switches at open & 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 (2 ×SPST)												
	3. Type C potentiometer unit (1K or 5K )												
	4. Type D potentiometer unit (1K or 5K ) with additional limit switches (2 units)												
	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. Space heater												
	8. Torque switches (2 units)												
	9. Various voltages (110/220/380VAC&24VDC, the other voltage is available upon request)												

### Additional Functions for NTE Series Electric Actuator:

Code	Function
H	1). Heater
DI	2). Dome type indicator
DP	3). Anti-Condensation indicator ( only available in IP67)
LED	4). The <b>GREEN/RED</b> LED dome type indicator(refer product picture item 1)
TS	5). Torque Switch(only available for NTE10~NTE60 & NTE300,refer product picture item 2)
OH	6). Over heat/thermal relay,SPST/NO
HW	7). Handwheel(refer product picture item 3)
B1	8). Code B1 control(1xSPDT for each at open & closed position)
LCU	9). Local control unit, 24VDC up to 1000Nm(refer product picture item 4)
IP68	10). IP68 enclosure
LT	11). Low temperature application up to -40°C
EB	12). The external box for modulating Control+1xSPST at open/close position(refer product picture item 5)

1. With **GREEN/RED** LED Dome Indicator



2. With Torque Switch



3. With Handwheel



4. With Local Control Unit

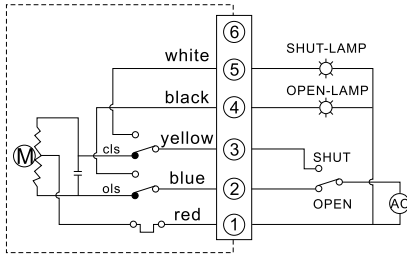


5. With External Terminal Box



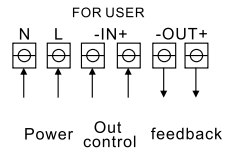
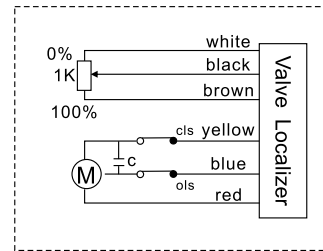
### Type A: Standard Type

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



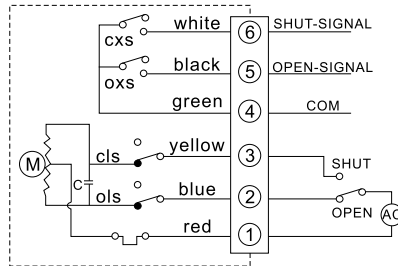
### Type E: Modulating Control

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



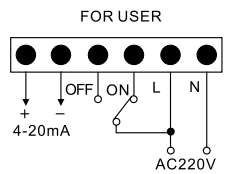
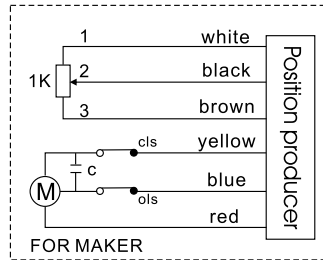
### Type B: 2xSPST(NO)

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



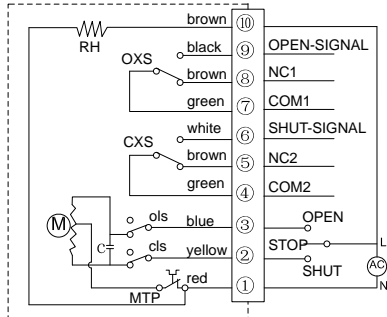
### Type F: R/I Converter

Output Signal:  
4-20mADC



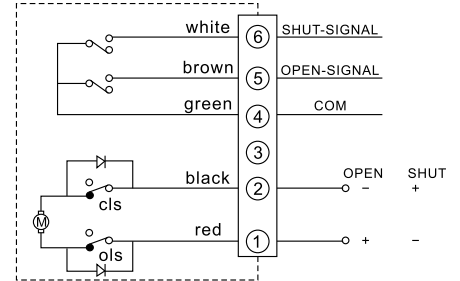
### Type B1: 2xSPDT(NO/NC)

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



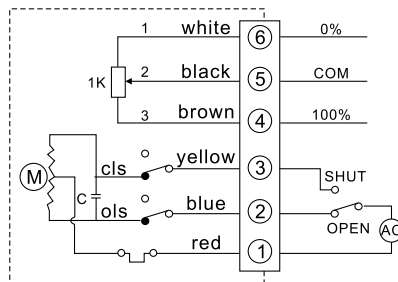
### DC Motor with 2xSPST(NO)

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



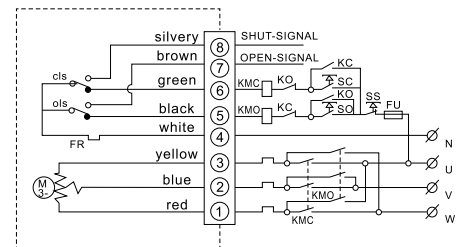
### Type C: Potentiometer

Output Signal:  
0-500Ω or 0-1000Ω

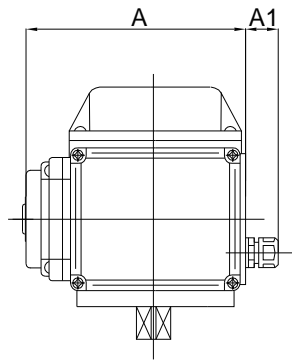


### 3 Phase, 380/415/440VAC Motor with 2xSPST(NO)

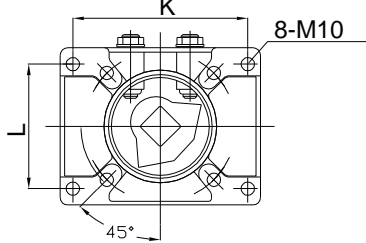
Output Signal:  
1xSPST(NO)  
micro-switch each at  
open & close position.



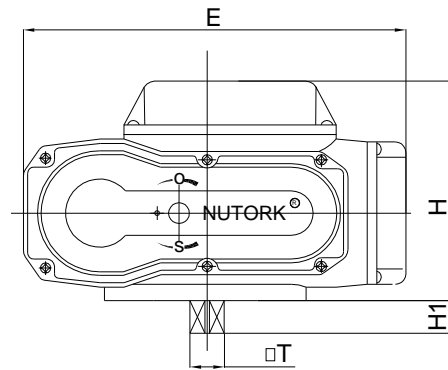




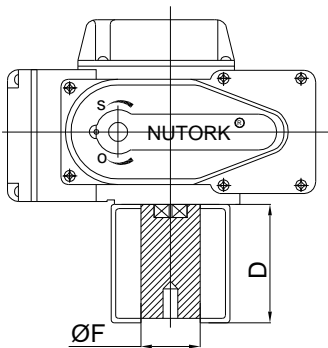
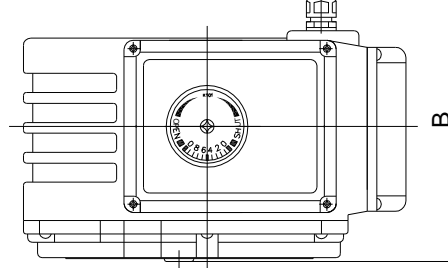
Bare Shaft



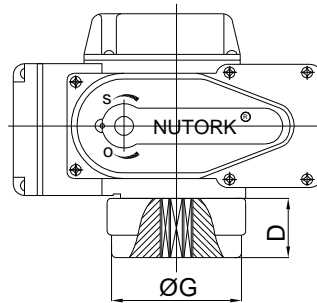
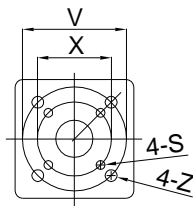
Bare Shaft



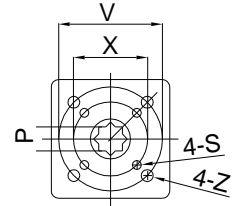
Bare Shaft



Bracket + Coupler



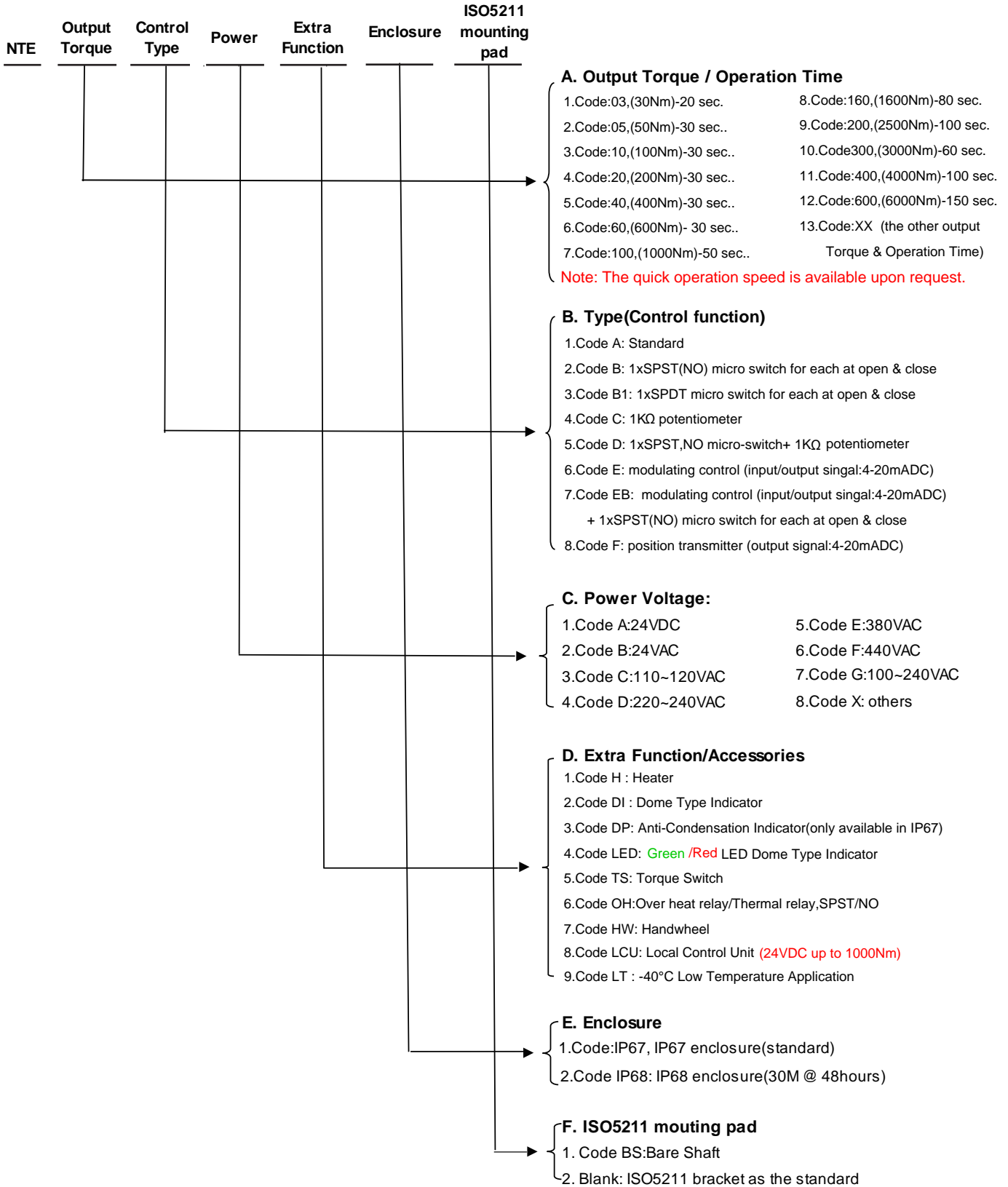
ISO5211



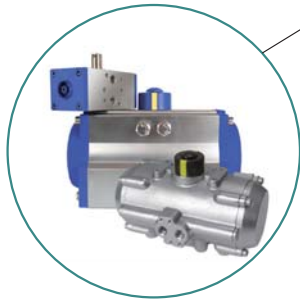
MM

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-300	234	22	325	165	30	36*36	148	116	257	140	165	27/36	—	4-M16	—	—	
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 & EExdIIBT6Max. Output Torque 6000Nm  
Approved by SIL3/IP68/MD/LVD/EMC.



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



Limit Switchbox IP67/IP68(50M@72hrs)  
Enclosure & EExdIIBT6/EEExdIICT6



Solenoid Valve 3/2NC & 5/2 Way, Static O-ring Sealing Design.  
Aluminum & 316SS Body  
IP67 & EExdIIBT6/EEExdIICT6



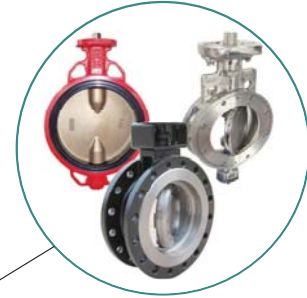
Air Filter Regulator Aluminum Body with Vinyl Paint & 316SS Body.  
Size: 1/4" ~ 1"



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.