



# ITQ SERIES ELECTRIC ACTUATOR

## 特點 Features

- 輕量化且結構緊湊之設計。
- 輸出扭力範圍為60Nm~3000Nm。
- 殼體為壓鑄鋁合金且表面經硬陽極處理及環氧樹脂塗裝。
- 標準防護等級為IP67，另提供防護等級IP68及防護等級Ex d IIB T4。
- 驅動器連接座設計按照ISO5211標準。
- 方便加工及安裝之可拆卸驅動軸襯。
- 具防止逆轉之安全鎖定裝置設計。
- 具可切換自動/手動操作之可離合式手輪。
- 具過扭力保護裝置設計。
- 具恆溫之空間加熱裝置設計。
- 可加裝選購環境控制之設備。



## 技術參數 Specification

Model	Rated torque NM	Operating time 50/60Hz 90°	Max bore size mm	Power consumption Watts	Motor insulation class	Rated current(A) 50/60Hz				No of handle turns NM	Weight 90°
						1 Phase		3Phase			
						110V	220V	380V	440V		
<b>Small ITQ</b>											
ITQ 0060	60	18/15	14	10	E	0.3	0.2	NA	NA	9	3
<b>Regular ITQ</b>											
ITQ 0100	100	21/18	22	15	F	0.95/1.05	0.50/0.55	N / A	N / A	10	7
ITQ 0160	160	26/22	25	40	F	1.60/1.70	0.85/0.90	0.30/0.30	0.30/0.32	12	15
ITQ 0240	240	26/22	25	40	F	1.62/1.72	0.87/0.92	0.32/0.32	0.32/0.34	12	15
ITQ 0350	350	31/26	40	40	F	1.72/1.80	0.92/0.95	0.32/0.32	0.32/0.35	14	20
ITQ 0500	500	31/26	40	90	F	3.60/3.90	1.50/1.60	0.52/0.56	0.55/0.58	14	20
ITQ 0800	800	39/32	48	180	F	3.80/4.20	2.05/2.20	0.82/0.88	0.82/0.85	17	25
ITQ 1100	1100	39/32	48	180	F	3.90/4.30	2.15/2.30	0.84/0.90	0.84/0.88	17	25
<b>Regular ITQ with Gear Box</b>											
ITQ 1500 (ITQ0500+ITG1/3)	1500	93/78	75	180	F	3.60/3.90	1.50/1.60	0.52/0.56	0.55/0.58	42	65
ITQ 2000 (ITQ0800+ITG1/3)	2000	117/97	75	180	F	3.80/4.20	2.05/2.20	0.82/0.88	0.82/0.85	52	70
ITQ 3000 (ITQ1100+ITG1/3)	3000	117/97	75	180	F	3.90/4.30	2.15/2.30	0.84/0.90	0.84/0.88	85	70
<b>Standard specification</b>											
Enclosure	Weatherproof IP67, NEMA4 and 4X, O-ring sealed (ITQ 0060 IP66)										
Main power supply	110/220VAC/1Ph/50/60Hz, 380/440/VAC/3Ph/50/60/Hz ±10%										
Control power supply	110/220VAC/1Ph/50/60Hz ±10%										
Duty cycle(on-off)	S2, 20~50% Max 10Min~30Min										
Duty cycle(modulating)	S4, 30~50% 300~1200 start/Hour										
Motor	Squirrel Caged induction motor										
Limit switches	2 each for Open and Close (SPDT 250VAC/10A rating except for ITQ 0060)										
Torque switches	1 each for Open and Close (SPDT 250VAC/10A rating except for ITQ 0060, 0100)										
Stall protection / set temperature	Built in Thermal protection, High 150°C±5°C, Low 97°C±15°C										
Travel angle	90°±5° (0°~100°)										
Position indicator	Plate with indication Arrow										
Manual override	De-clutchable(except for ITQ 0060)										
Self locking	Provided by double worm gearing (no brake)(except for ITQ 0060)										
Mechanical stopper	1 each for each travel end (Open and class), external & adjustable (except for ITQ 0060)										
Heater	5W (110/220VAC) for anti-condensation										
Cable entries	2 X PF 3/4" TAP (except for ITQ 0060 2 X PT 1/2" TAP)										
Lubrication	EP type grease										
Terminal block	Screw and Lever Push type (spring loaded)										
Ambient temperature	-20°C~70°C										
Ambient humidity	90%RH Max (Non-Condensing)										
Anti vibration	XYZ 10g, 02~34Hz, 30 minutes										
External coating	Dry power (Polyester)										



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## Option availability

Mechanical		
Symbol	Description	Remark
EX	Explosion proof (Ex d II B T4)	Approved by KTL
WT	Watertight (IP68), Temporary submersible	10M Head 100hours
ALS	Auxiliary limit switches (Max 2 for each travel end)	Except for ITQ 0100
ATS	Auxiliary torque switches (Max 2 for each travel end)	Except for ITQ 0100
EXT	Extended travel angle (up to 120o, 135o, 180o, 270o, )	Except for ITQ with Gear box
SV	Variation in torque and operating speed	Please consult before ordering
Remote monitoring and control		
PK	Potentiometer kit (output signal : 0~1 Kohm) High resolution potentiometer and precisely machined gearing are directly engaged with drive shaft to feedback continuous position of valve	
CT	Current transmitter (output signal : 4-20mA) Zero / Span Adjustment; Convertable DIP Switch (4 wire to 2 wire)	
RPC / Signal configuration	Remote position controller (by input and output signal) Input : 4-20mA, 0-10VDC, 2~10VDC, 1~5VDC, 0~5VDC ; Output : 4-20mA, 0-10VDC, 2~10VDC, 1~5VDC, 0~5VDC; Auto-calibration , Reverse operating direction	

## Local control

### ➤ LP2 for 1 & 3 Phase (ITQ 0100~ 3000)

控制訊號: 110/220VAC, 24VDC

機械選擇開關-本機/遙控&開始/暫停/關閉

燈號指示說明-遙控-黃, 本機-紅色, 開始-綠色, 關閉-紅色

\* 其他配件: PK, CT, RPC(Modulating), IP67, Explosion proof

### ➤ LM2 for 3 phase(ITQ 0100~ 3000)

機械選擇開關-本機/遙控&開始/暫停/關閉

燈號指示說明-遙控-黃燈, 本機-紅燈, 開始-綠燈, 關閉-紅燈

旋轉控制接觸器可以控制變壓器(110/220VAC)

其他配件: PK, CT, RPC(Modulating), IP67, Explosion proof

### ➤ LP4 for 1 & 3 phase(ITQ 0160~ 3000)

控制訊號: 110/220VAC, 24VDC

燈號指示說明-遙控-黃燈, 本機-紅燈, 開始-綠燈, 關閉-紅燈

燈號指示說明- 關閉-綠色, 關閉中-閃爍綠燈

作動中-黃燈, 故障-閃爍黃燈; 開啓-紅燈, 開啓中-閃爍紅燈

其他配件: PK, CT, RPC(Modulating), IP67, Explosion proof

### ➤ LD1 for 3phase(Integral) (ITQ 0160~ 3000)

機械選擇開關-本機/遙控&開始/暫停/關閉

燈號指示說明- 關閉-綠色, 關閉中-閃爍綠燈

作動中-黃燈, 故障-閃爍黃燈; 開啓-紅燈, 開啓中-閃爍紅燈

電子扭轉接觸器, 變壓器, 階段分辨器(偵查, 自動校正)

34points terminal strips

Remote position indication : Position monitoring relays

其他配件: PK, CT, RPC(Modulating), Profibus communication,

Local digital position indication(LCD): Either 4-20mA DC or %, IP67, Explosion proof

### ➤ LD2 for 3 phase(integral with IP68 enclosure) (ITQ 0160~ 3000)

機械選擇開關-本機/遙控&開始/暫停/關閉

燈號指示說明- 關閉-綠色, 關閉中-閃爍綠燈

作動中-黃燈, 故障-閃爍黃燈; 開啓-紅燈, 開啓中-閃爍紅燈

電子扭轉接觸器, 變壓器, 階段分辨器(偵查, 自動校正)

34points terminal strips,

Separate compartment for terminal block

Remote position indication : Position monitoring relays

其他配件: PK, CT, RPC(Modulating), Profibus communication,

Local digital position indication(LCD): Either 4-20mA DC or %, IP67, Explosion proof

