

## Electrical Actuator type ITQ 010-300



- **Self locking** - Provided by double worm gearing to keep position of valve unchanged against reverse torque from valve.
- **Motor** - Specially designed induction motor to generate high starting torque and high efficiency equipped with thermal protector to prevent damage from over heating.
- **Torque switches** - Protects actuator from damage caused by overload from the driven valve over the whole travel. 1 for each open/close.
- **Manual override** - Auto / Manual switchable lever and hand wheel engagement for emergency manual operation. Drive force automatically resorted by motor start, unless lever padlocked to prevent this occurring.
- **External mechanical stopper** - Prevents over run of travel angle when limit switch fails.
- **Removable drive bushing and ISO5211 mounting base** - (F07~F16) for easy mounting on valve.

### STANDARD SPECIFICATION

Enclosure	Weatherproof IP67, NEMA 4X and 6, O-ring sealed
Main power supply	110 / 220 VAC / 1 phase / 50/60 Hz, 380 / 440 VAC / 3 phases / 50/60 Hz $\pm$ 10%, 24 VDC
Duty cycle ON/OFF	S2: 10 – 30 min
Duty cycle modulating	S4: 30-50%, 300-1200 start/hour
Motor	Induction motor
Limit switches	4 pcs. Adjustable travel switches (SPDT 250VAC/10A rating)
Torque switches	2 pcs. 1 for open and 1 for closing (SPDT 250VAC/10A rating except for ITQ 010)
Stall protection/ set. Temp.	Built in thermal protection, open 150°C $\pm$ 5°C, 97°C $\pm$ 15°C
Travel angle	90° $\pm$ 5° (0° - 100°)
Position indicator	Continuous mechanical indicator with arrow
Manual override	De-clutchable
Self locking	Provided by double worm gearing (no brake)
Mechanical stopper	1 each for each travel end (open and close), external and adjustable
Space heater	5W (110/220VAC) for anti-condensation
Cable entries	2 – PF x $\frac{3}{4}$ " TAP
Terminal block	Screw and lever push type (spring loaded)
Ambient temperature	Basic actuator: -20°C – +70°C, c/w control options: -10°C – +60°C
Ambient humidity	90% RH max. (non-condensing)
Anti vibration	XYZ 10g. 02-34Hz. 30 minutes
Housing	Hard anodized aluminum casting
External coating	Dry powder polyester

### TECHNICAL DATA

Type	Torque (Nm)	Duty cycle S4 (%)	Operating time (sec.) 50 Hz / 60 Hz	Max. bore size Key / Square ( $\phi$ ) / (•)	Rated current (A) 1 fase 220 50 Hz / 60 Hz	Motor insulation class	ISO 5211 mounting flange	Weight (Kg)	No. of hand wheel turns
ITQ 010	100	40	21 / 18	22 / 20	0.52 / 0.58	F	F07	7	10
ITQ 016	160	30	26 / 22	25 / 23	0.85 / 0.90	F	F07/F10	15	12
ITQ 024	240	30	26 / 22	25 / 23	0.87 / 0.90	F	F07/F10	15	12
ITQ 035	350	30	31 / 26	40 / 34	0.92 / 0.95	F	F10/F12	20	14
ITQ 050	500	30	31 / 26	40 / 34	1.50 / 1.60	F	F10/F12	20	14
ITQ 080	800	30	39 / 32	48 / 40	2.05 / 2.20	F	F12/F14	25	17
ITQ 110	1100	30	39 / 32	48 / 40	2.15 / 2.30	F	F12/F14	25	17
ITQ 200	2000	30	59 / 50	75 / 64	2.95 / 3.15	F	F16	42	13
ITQ 300	3000	30	59 / 50	75 / 64	3.75 / 3.85	F	F16	42	13

Wiring diagram included with delivery