

Limitorque® LTQ Electric Actuators



Limitorque® LTQ intrusive quarter-turn actuators

The Flowserve Limitorque LTQ compact, quarter-turn electric actuators offer superior reliability and performance as well as lower ownership and maintenance costs. They provide broad application versatility and are highly customizable for meeting exacting customer needs.

LTQ actuators are ideal for applications that require a simplistic, cost-effective, quarter-turn actuator that has a variety of control options, torque and limit switches, and discrete position feedback capabilities. The actuators are compatible with a wide range of ball and butterfly valves, and also can be used to drive dampers in a broad range of power, oil and gas, chemical, water and general industry applications.

Features and benefits

Superior reliability, performance and repeatability:

The actuator's robust design incorporates a highly efficient, compact epicyclic drive transmission technology that provides unmatched multiplication of motor torque. It also reduces wear and tear and extends the life of the actuator considerably in comparison to worm- or spur-type mechanical drives.

Lower total cost of ownership: A self-locking design with a permanently lubricated drive eliminates the need for periodic lubrication and allows for maintenance-free operation over the life of the actuator.

High degree of customization: LTQ actuators are available in a range of torques from 35 to 2,230 Nm (26 to 1,696 ft-lb), operating voltages from 12 VAC/VDC to three-phase 575 VAC, and fail-safe (super-cap, battery backup) options that allow for a higher degree of customization to meet exacting customer needs.

Control variety: Actuator control options are available in analog modulation, local control stations, and discrete two-, three-, four and five-wire control configurations that can be powered internally or externally by 24 VDC or 110 VAC.

Interchangeable bushing: LTQ series actuators are supplied with ISO5211-compliant, double-square drive sockets. On the LTQ008 series up through the LTQ203 series, the drive socket is removable and can be fitted with a different size or a different shape female drive socket. Available patterns include square, double square, double D and round keyed shafts. Contact Limitorque for available splined drive inserts.

Epicyclic drive transmission: Highly efficient, compact transmission technology provides unmatched multiplication of motor torque compared to spur geartrain-type systems. Additionally, the final drive output utilizes worm gear geometry to provide self-locking gearsets without any type of braking required to hold the connected device in position. This technology also allows for a manual override system which does not require any type of declutching mechanism.

Color-coded cam system: Easily accessible travel and auxiliary switch cams are color-coded to provide instant recognition of the CW or CCW cams when making stroke adjustments. Cam positions are easily changed by utilizing 2.5 mm (0.1 in) setscrews across the entire LTQ range of actuators.

ISO mounting flange: The bottoms of the LTQ actuators are machined to meet ISO5211 standards. On the LTQ008 series up through the LTQ203 series, should a different flange pattern be needed, these models can be fitted with available flanges without any affect on actuator performance. Contact Limitorque for available ISO-compliant flanges.

LTQ Series electric actuator part number matrix

Model	Frame Size and Torque		Environment		Interface			Control		Voltage			
LTQ	150		0		S N			A		6 1			
003	F05/F07 14 mm (0.55 in) DSQ	310 lb 26 ft-lb	0	IP67	S	N	IP67 (IP68 option), no LCS	A	Open/Close/Jog	A	12 VAC / VDC	0	12/24/120/230 (default)
0H3	F05/F07 14 mm (0.55 in) DSQ	310 lb HW 26 ft-lb	8	IP68	L	K	LCS, knob/key type on/off only, IP65 only, round, three indicators	B	Mod 4-20mA	B	24 VAC / VDC		
004	F05/F07 14 mm (0.55 in) DSQ	440 lb 37 ft-lb						C	Mod 2-10V	C	120 / 1 / 60		
0H4	F05/F07 17 mm (0.67 in) DSQ	440 lb HW 37 ft-lb						D	Two-wire NO/NC	D	120 / 1 / 50		
								E	230 / 1 / 60				
									F	230 / 1 / 50			
Configurations below for sizes 008 to 203													
008	F07/F10 14 mm (0.55 in) SQ	880 lb 73 ft-lb	0	IP67	S	N	IP67 (IP68 option), no LCS	A	008	A	12 VAC / VDC	0	12/24/ 120/230 (default)
017	F07/F10 14 mm (0.55 in) SQ	1,770 lb 148 ft-lb	8	IP68	L	L	LCS, non-intrusive knob switches IP67, rectangular, LED display	B	Mod 4-20mA	B	24 VAC / VDC		
034	F10/F12 18 mm (0.71 in) SQ	3,540 lb 295 ft-lb						C	Mod 2-10V	C	120 / 1 / 60		
053	F10/F12 18 mm (0.71 in) SQ	5,310 lb 443 ft-lb								D	120 / 1 / 50		
070	F10/F12 24 mm (0.94 in) SQ	7,080 lb 590 ft-lb								E	230 / 1 / 60		
088	F10/F12 24 mm (0.94 in) SQ	8,850 lb 738 ft-lb								F	230 / 1 / 50		
150	F14 28 mm (1.10 in) SQ	15,040 lb 1,253 ft-lb								Three-Phase Solutions			
203	F14 30 mm (1.18 in) SQ	20,350 lb 1,696 ft-lb								2	220 / 3 / 60	1	NCU use with existing MCC
										3	220 / 3 / 60		
										4	380 / 3 / 60		
										5	380 / 3 / 50	3	BIC Full MCC
										6	480 / 3 / 60		
										7	480 / 3 / 50		
										8	575 / 3 / 60 (limited availability)	1	NCU (Only)
										9	575 / 3 / 50 (limited availability)		

LTQ Series electric actuator part number matrix (cont'd.)

Option 1		Option 2		Option 3	
B		0		0	
Actuator-specific		LTQ008 and larger only			
0	None	0	NCU / five-wire (default)	0	Future
A	Arctic package LTQ008 and larger only	D	Int two-wire NO/NC		
B	Internal battery backup	E	Int three-wire maintained		
C	Internal supercap backup LTQ003 and LTQ004 only	F	Int three-wire in		
Q	Mencom Quick Connect	G	Int four-wire		

LTQ Series electric actuators

Key features and benefits

- Powder-coated aluminum alloy housing
- NEMA 4/4X and IP67 enclosure
- Raised position indicator
- ISO5211-compliant mounting
- Compartment heater
- Clutchless manual override
- Self-locking drive
- Permanently lubricated
- Thermally protected motor
- Extended-duty motors
- Four auxiliary switches (LTQ008 and larger)
- Torque switches standard

Optional features

- Interchangeable ISO5211 mount
- Interchangeable drive inserts
- Positioners
- Three-position control
- Analog feedback
- Local control stations
- Three-phase, single-phase, DC power
- IP68 submersible
- Two-, three, four- and five-wire discrete control
- Super cap or battery backup
- Arctic package
- XP rated

Clean, easily accessible internal wiring layout
(4) 1A 24V aux limit switches standard
Anti-condensate heater standard

High-efficiency AC and DC drive motors

Non-declutchable manual override system

Suitable for use with overhead chain-wheel installations

(2) 3/4 in conduit entry ports

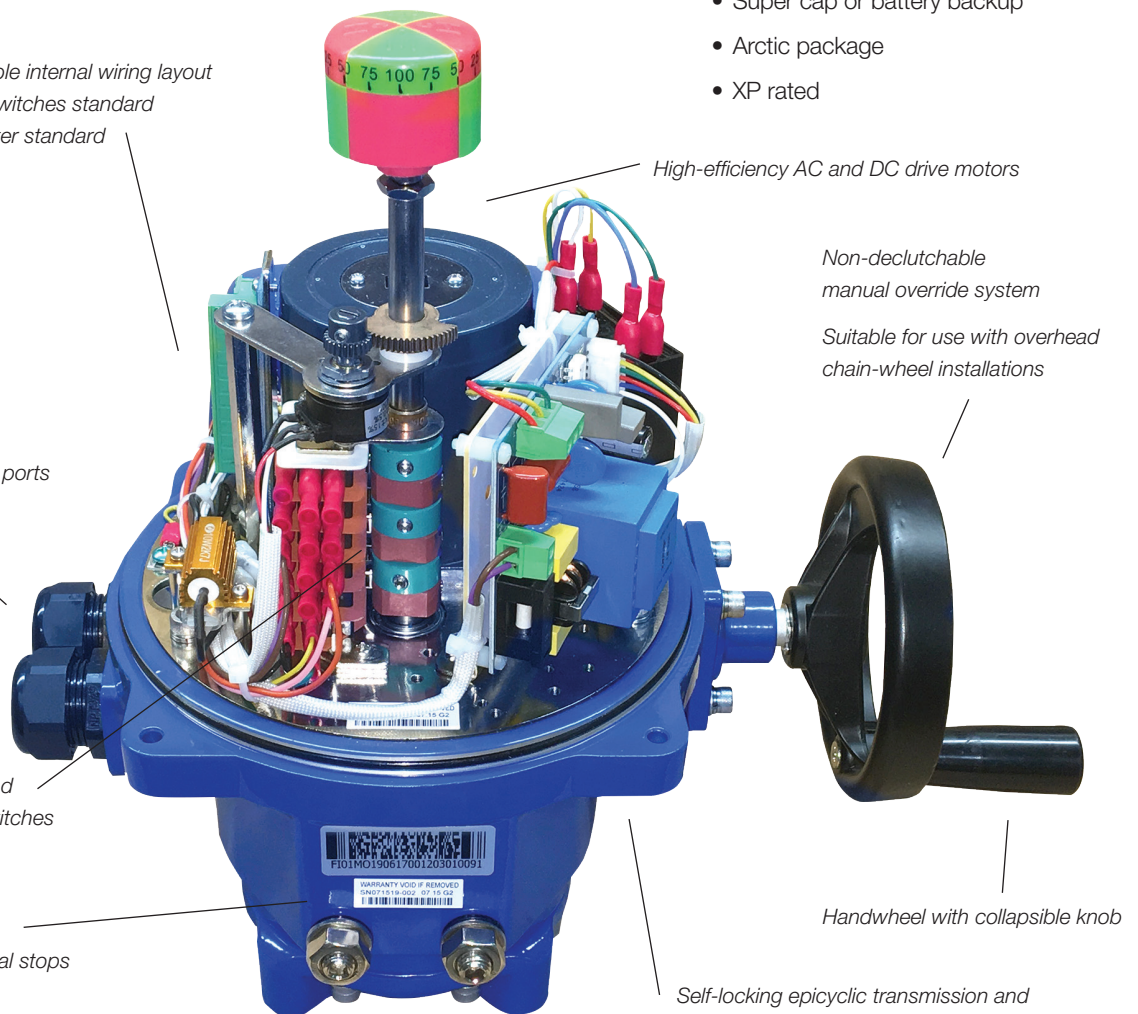
Color-coded cams and additional auxiliary switches

Externally accessible adjustable mechanical stops

Handwheel with collapsible knob

Self-locking epicyclic transmission and low pull-force worm override design

*Features typical of LTQ008 Series and larger



LTQ0H3 Series on/off/proportional electric actuators

Overview

The LTQ0H3 Series quarter-turn electric industrial service actuators deliver up to 440 lbf-in torque in voltages ranging from 12V up through 230V in on/off or proportional control modes. Other key features include:

- Units are equipped with two (2) volt-free Form A auxiliary switches rated up to 3A 24V
- ISO5211-compliant mounting with a double square female drive

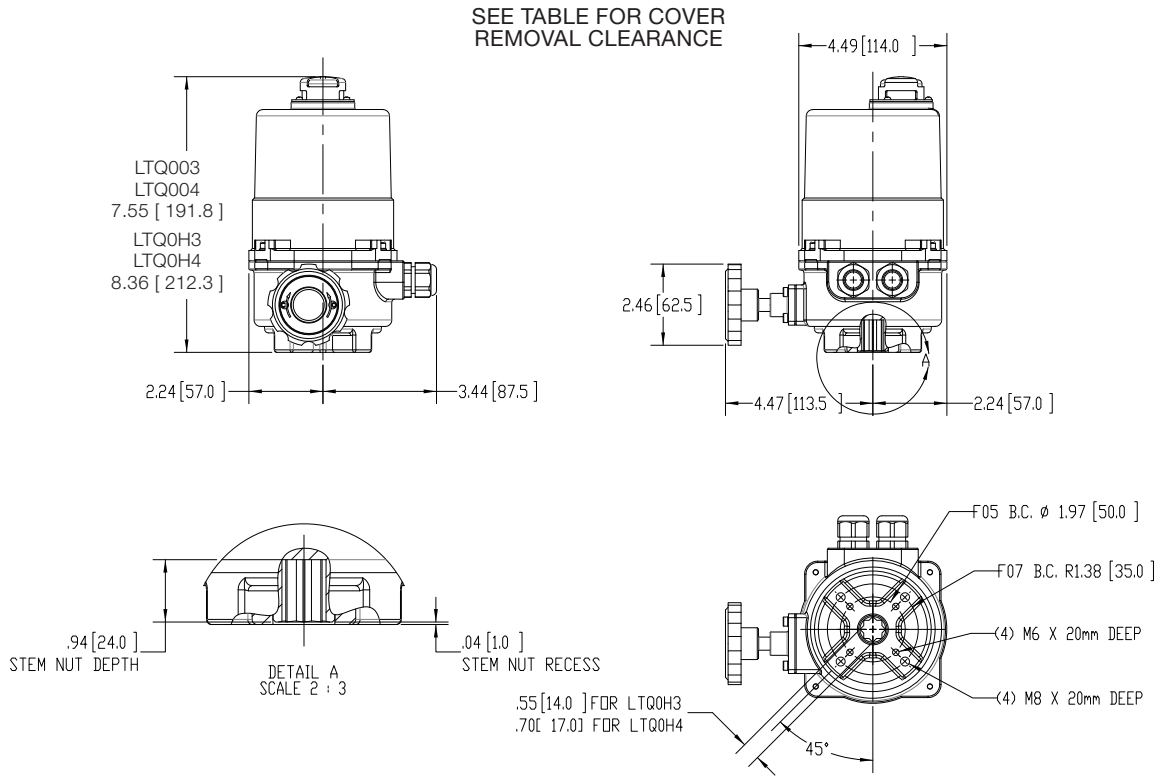
- Raised visual position indicator
- Manual override handwheel is standard
- NEMA 4/4X and IP67 compliant
- Two (2) ½ in EMT entry ports with sealed cable glands



Technical information

Actuator Specifications		LTQ0H3	LTQ0H4	
Supply	Torque Output (Nm / in-lb)	35 / 310	50 / 440	
12VAC* 12VDC*	Current Draw (Start / Run / LRA)	3.5A / 2.0A / 3.8A	3.5A / 2.0A / 3.8A	
	Speed (90°) DC-60Hz/50Hz, Seconds	8 / 8	10 / 10	
	Motor - 12V DC Perm Magnet Two-pole Brush	6W	6W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	All - 130°C (266°F) / Class B	
Motor Starts, per hour, Max		All - 600		
24VAC- 24VDC	Current Draw (Start / Run / LRA)	2.1A / 1.2A / 2.3A	2.1A / 1.2A / 2.3A	
	Speed (90°) DC-60Hz/50Hz, Seconds	8 / 8	10 / 10	
	Motor - 24V DC Perm Magnet Two-pole Brush	6W	6W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	All - 130°C (266°F) / Class B	
Motor Starts, per hour, Max		All - 600		
120VAC	Current Draw (Start / Run / LRA)	0.4A / 0.4A / 0.5A	0.4A / 0.4A / 0.5A	
	Speed (90°) 60Hz / 50Hz, Seconds	9 / 11	13 / 15	
	Motor - 120V Capacitor Run TENV	10W	10W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
230VAC	Current Draw (Start / Run / LRA)	0.2A / 0.2A / 0.3A	0.2A / 0.2A / 0.3A	
	Speed (90°) 60Hz / 50Hz, Seconds	9 / 11	13 / 15	
	Motor - 230V Capacitor Run TENV	10W	10W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
All	Manual Override	Hand Wheel		
	Environmental Rating	NEMA 4/4X and IP67		
	Electrical Entry (2)	½ in EMT or Polyamide Gland		
	Control	On/Off, Proportional, 2 Pos RO, RC and Three-position		
	Auxiliary Switch - End of Travel	(2) Form A Volt-Free, Rated 3A @ 24V		
	Ambient Operating Range	-30°C to 70°C (-22°F to 158°F)		
	Humidity Range	0 to 95% RH		
	Altitude Limit	3,000 m (9,850 ft)		

*12V versions available custom order



Technical information (cont'd.)

Cover Removal Clearance		Handwheel		Weight	
Model	Type	mm/in	mm/in	# Turns for 90°	kg/lb
LTQ0H3	On/off - all	125/4.93	62.5/2.46	12 turns 90°	3.0/6.6
	Mod - LV				6.3/13.8
	Mod - HV				3.1/6.8
LTQ0H4	On/off - all	125/4.93	62.5/2.46	12 turns 90°	3.0/6.6
	Mod - LV				6.3/13.8
	Mod - HV				3.1/6.8

LTQ008 Series on/off/proportional electric actuators (1PH and DC)

Overview

The LTQ008 Series quarter-turn electric industrial service actuators deliver up to 1,770 in-lb torque in voltages ranging from 12V up through 230 V in on/off or proportional control modes. Other key features include:

- Units are equipped with four (4) volt-free Form A auxiliary switches rated up to 1A 24V
- ISO5211-compliant mounting with double square female drive inserts
- Raised visual position indicator
- Clutch-free manual override handwheel standard
- NEMA 4/4X and IP67 compliant

- Two (2) 3/4 in EMT entry ports with sealed cable glands
- Torque switches standard

Options

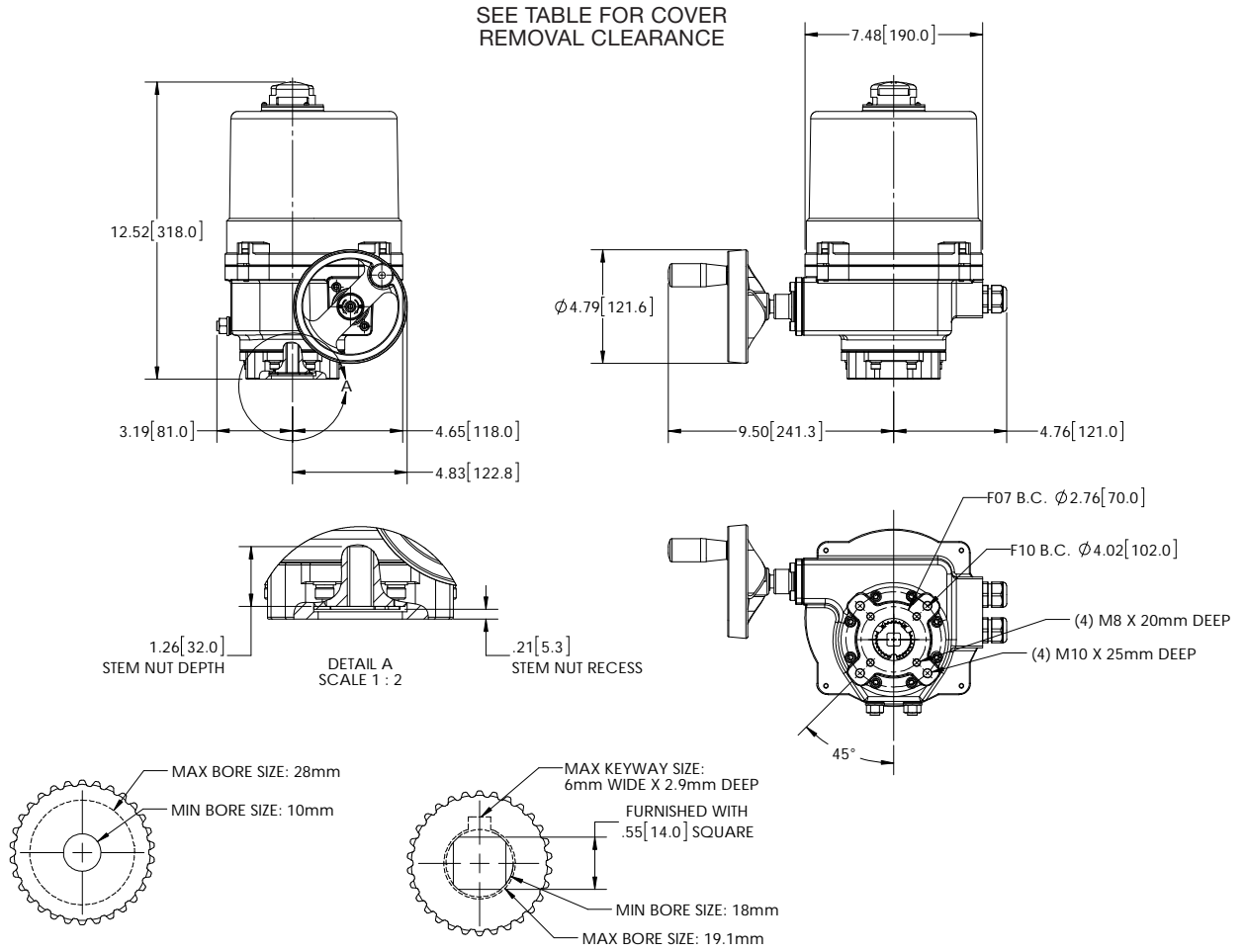
- Motor control centers
- Local control stations
- IP68 submersion
- Battery backup
- Interchangeable ISO5211 flange and drives
- Two-, three- and four-wire control available



Technical information

Actuator Specifications		LTQ008	LTQ017	
Supply	Torque Output (Nm / in-lb)	100 / 880	200 / 1,770	
12VAC* 12VDC*	Current Draw (Start / Run / LRA)	7.2A / 5.2A / 17.8A	7.2A / 5.2A / 17.8A	
	Speed (90°) DC-60Hz/50Hz, Seconds	14 / 14	28 / 28	
	Motor - 12V DC Brush TENV	25W	25W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	All - 130°C (266°F) / Class B	
Motor Starts, per hour, Max		All - 600		
24VAC- 24VDC	Current Draw (Start / Run / LRA)	4.2A / 3.2A / 11A	4.2A / 3.2A / 11A	
	Speed (90°) DC-60Hz/50Hz, Seconds	14 / 14	28 / 28	
	Motor - 24V DC Brush TENV	25W	25W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	All - 130°C (266°F) / Class B	
Motor Starts, per hour, Max		All - 600		
120VAC	Current Draw (Start / Run / LRA)	1.2A / 0.9A / 1.5A	1.2A / 0.9A / 1.5A	
	Speed (90°) 60Hz / 50Hz, Seconds	16 / 19	33 / 39	
	Motor - 120V Capacitor Run TENV	40W	40W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
230VAC	Current Draw (Start / Run / LRA)	0.5A / 0.4A / 0.7A	0.5A / 0.4A / 0.7A	
	Speed (90°) 60Hz / 50Hz, Seconds	16 / 19	33 / 39	
	Motor - 230V Capacitor Run TENV	40W	40W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
All	Environmental Rating	NEMA 4/4X and IP67		
	Electrical Entry (2)	3/4 in EMT or Polyamide Gland		
	Control	On/Off, Proportional, 2 Pos RO, RC and Three-position		
	Auxiliary Switch - End of Travel	(4) Form A Volt-Free, Rated 1A @ 24V		
	Ambient Operating Range	-30°C to 70°C (-22°F to 158°F)		
	Humidity Range	0 to 95% RH		
	Altitude Limit	3,000 m (9,850 ft)		

*12V versions available custom order



Technical information (cont'd.)

Cover Removal Clearance		Handwheel		Weight
Model	mm/in	mm/in	# Turns for 90°	kg/lb
LTQ008	200/8	122/4.79	12.5 turns 90°	11/24.5
LTQ017	200/8	122/4.79	12.5 turns 90°	11/24.5

LTQ008 Series on/off/proportional electric actuators (3PH)

Overview

The LTQ008 Series quarter-turn electric industrial service actuators deliver up to 1,770 lbf-in torque in voltages ranging from 220/3 up through 480/3 in on/off or proportional control modes and 575/3 in NCU mode only. Other key features include:

- Units are equipped with four (4) volt-free Form A auxiliary switches rated up to 1A 24V
- ISO5211-compliant mounting with double square female drive inserts
- Raised visual position indicator
- Clutch-free manual override handwheel standard
- NEMA 4/4X and IP67 compliant

- Two (2) 3/4 in EMT entry ports with sealed cable glands
- Torque switches standard

Options

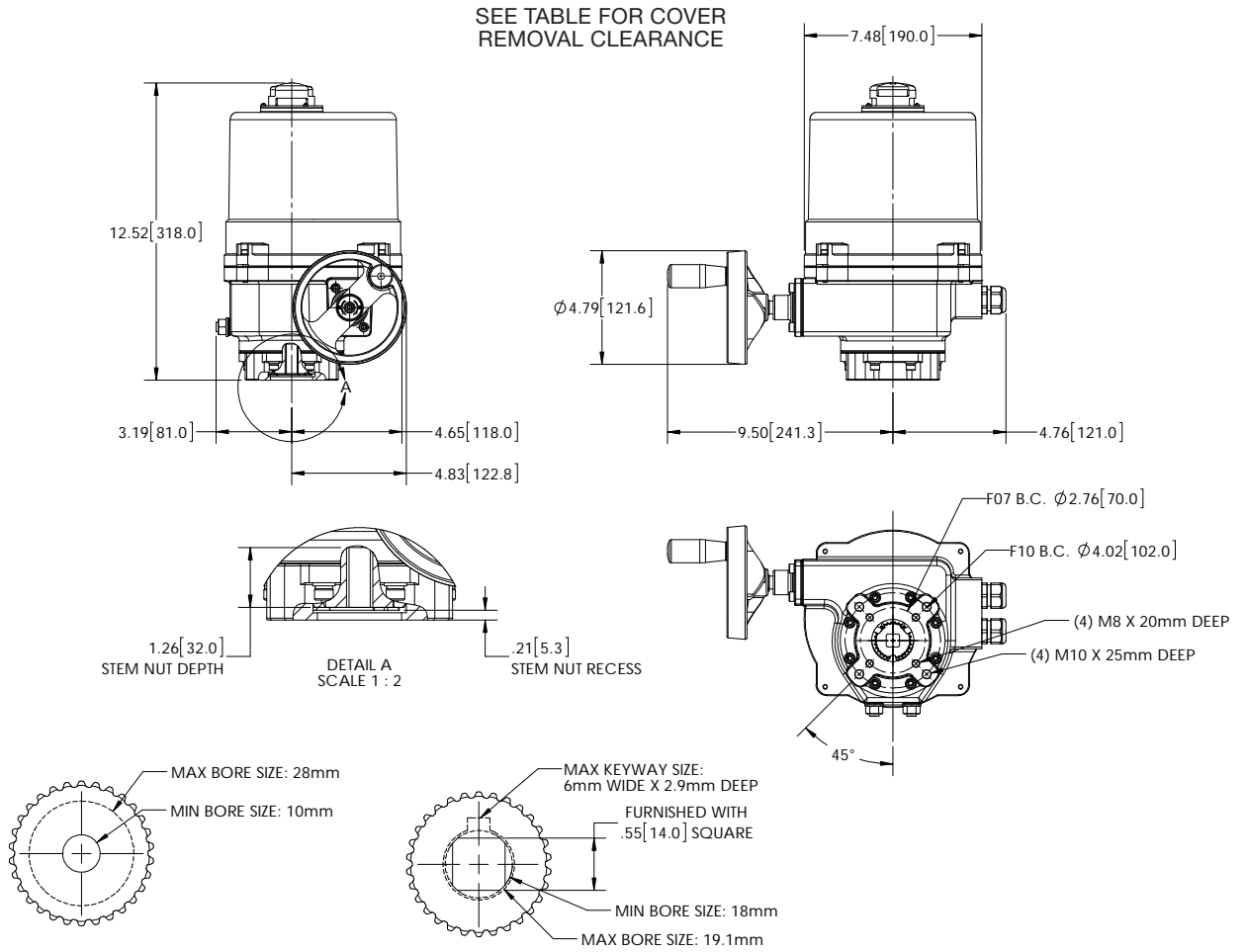
- Motor control centers
- Local control stations
- IP68 submersion
- Battery backup
- Interchangeable ISO5211 flange and drives
- Two-, three- and four-wire control available



Technical information

Actuator Specifications		LTQ008	LTQ017	
Supply	Torque Output (Nm / in-lb)	100 / 880	200 / 1,770	
220/3PH	Current Draw (Start / Run / LRA)	0.7A / 0.6A / 1.0A	0.7A / 0.6A / 1.0A	
	Speed (90°) DC-60Hz/50Hz, Seconds	16 / 19	33 / 39	
	Motor - 220V Polyphase TENV	40W	40W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
380/3PH	Current Draw (Start / Run / LRA)	0.4A / 0.3A / 0.6A	0.4A / 0.3A / 0.6A	
	Speed (90°) DC-60Hz/50Hz, Seconds	16 / 19	33 / 39	
	Motor - 380V Polyphase TENV	40W	40W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
480/3PH	Current Draw (Start / Run / LRA)	0.2A / 0.2A / 0.4A	0.2A / 0.2A / 0.4A	
	Speed (90°) 60Hz / 50Hz, Seconds	16 / 19	33 / 39	
	Motor - 480V Polyphase TENV	40W	40W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
575/3PH	Current Draw (Start / Run / LRA)	0.2A / 0.2A / 0.3A	0.2A / 0.2A / 0.3A	
	Speed (90°) 60Hz / 50Hz, Seconds	16 / 19	33 / 39	
	Motor - 575V Polyphase TENV	40W	40W	
	On/Off - Basic	Duty Cycle (IEC60034)	25% (S2-15 min)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F	
Motor Starts, per hour, Max		600		
All	Environmental Rating	NEMA 4/4X and IP67		
	Electrical Entry (2)	3/4 in EMT or Polyamide Gland		
	Control	On/Off, Proportional, in Five Levels of Control and Protection (some limited applications)		
	Auxiliary Switch - End of Travel	(4) Form A Volt-Free, Rated 1A @ 24V		
	Ambient Operating Range	-30°C to 70°C (-22°F to 158°F)		
	Humidity Range	0 to 95% RH		
	Altitude Limit	3,000 m (9,850 ft)		

*12V versions available custom order



Technical information (cont'd.)

Model	Cover Removal Clearance		Handwheel		Weight
	mm/in	mm/in	mm/in	# Turns for 90°	kg/lb
LTQ008	200/8	122/4.79	122/4.79	12.5 turns 90°	11/24.5
LTQ017	200/8	122/4.79	122/4.79	12.5 turns 90°	11/24.5

LTQ034 Series on/off/proportional electric actuators (1PH and DC)

Overview

The LTQ034 Series quarter-turn electric industrial service actuators deliver up to 20,350 in-lb torque in voltages ranging from 12V up through 230V in on/off or proportional control modes. Other key features include:

- Units are equipped with four (4) volt-free Form A auxiliary switches rated up to 1A 24V
- ISO5211-compliant mounting with double square female drive inserts
- Raised visual position indicator
- Clutch-free manual override handwheel standard
- NEMA 4/4X and IP67 compliant

- Two (2) ¾ in EMT entry ports with sealed cable glands
- Torque switches standard

Options

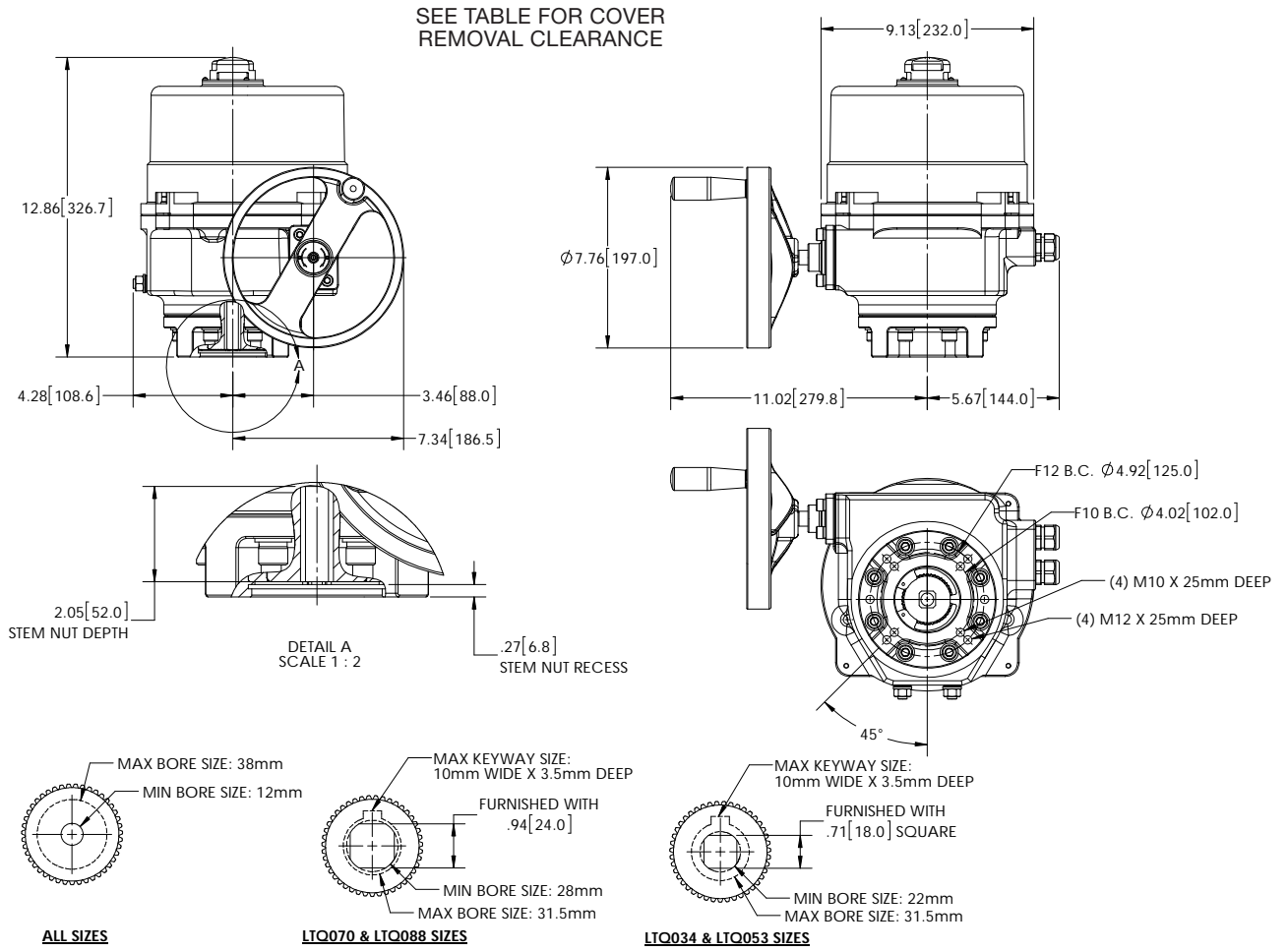
- Motor control centers
- Local control stations
- IP68 submersion
- Battery backup
- Interchangeable ISO5211 flange and drives
- Two-, three- and four-wire control available



Technical information

Actuator Specifications		LTQ034	LTQ053	LTQ070	LTQ088	
Supply	Torque Output (Nm / in-lb)	400 / 3,540	600 / 5,310	800 / 7,080	1,000 / 8,850	
12VAC*- 12VDC*	Current Draw (Start / Run / LRA)	11.4A / 9.4A / 24.4A	11.4A / 9.4A / 24.4A	11.4A / 9.4A / 24.4A	-	
	Speed (90°) DC-60Hz/50Hz, Seconds	21 / 21	28 / 28	34 / 34	-	
	Motor - 12vdc Perm Magnet Brush Type	40W	40W	40W	-	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)			-
		Motor Protection, Temp / Class	All - 130°C (266°F) / Class B			-
Motor Starts, per hour, Max		All - 600			-	
24VAC- 24VDC	Current Draw (Start / Run / LRA)	7.0A / 5.8A / 15A	7.0A / 5.8A / 15A	7.0A / 5.8A / 15A	10.5A / 7.8A / 22A	
	Speed (90°) DC-60Hz/50Hz, Seconds	21 / 21	28 / 28	34 / 34	25 / 25	
	Motor - 24V DC Brush TENV	40W	40W	40W	90W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)			25% (S2-15 min) / 75% (S4-75%)
		Motor Protection, Temp / Class	All - 130°C (266°F) / Class B			All - 130°C (266°F) / Class B
Motor Starts, per hour, Max		All - 600			All - 600	
120VAC	Current Draw (Start / Run / LRA)	3.0A / 1.8A / 3.5A	3.0A / 1.8A / 3.5A	3.0A / 1.8A / 3.5A	3.8A / 2.3A / 4.8A	
	Speed (90°) 60Hz / 50Hz, Seconds	24 / 29	33 / 39	39 / 47	39 / 47	
	Motor - 120V Capacitor Run TENV	90W	90W	90W	120W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)			-
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H			-
Motor Starts, per hour, Max		All - 600			-	
230VAC	Current Draw (Start / Run / LRA)	1.7A / 0.9A / 1.9A	1.7A / 0.9A / 1.9A	1.7A / 0.9A / 1.9A	2.2A / 1.1A / 2.4A	
	Speed (90°) 60Hz / 50Hz, Seconds	24 / 29	33 / 39	39 / 47	39 / 47	
	Motor - 230V Capacitor Run TENV	90W	90W	90W	120W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)			-
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H			-
Motor Starts, per hour, Max		All - 600			-	
All	Environmental Rating	NEMA 4/4X and IP67				
	Electrical Entry (2)	¾ in EMT or Polyamide Gland				
	Control	On/Off, Proportional, 2 Pos RO, RC and Three-position				
	Auxiliary Switch - End of Travel	(4) Form A Volt-Free, Rated 1A @ 24V				
	Ambient Operating Range	-30°C to 70°C (-22°F to 158°F)				
	Humidity Range	0 to 95% RH				
	Altitude Limit	3,000 m (9,850 ft)				

*12V versions available custom order



Technical information (cont'd.)

Cover Removal Clearance		Handwheel		Weight
Model	mm/in	mm/in	# Turns for 90°	kg/lb
LTQ034 - LTQ088	200/8	197/7.76	14.5 turns 90°	22/49

LTQ034 Series on/off/proportional electric actuators (3PH)

Overview

The LTQ034 Series quarter-turn electric industrial service actuators deliver up to 20,350 in-lb torque in voltages ranging from 220/3 up through 480/3 in on/off or proportional control modes and 575/3 (basic only). Other key features include:

- Units are equipped with four (4) volt-free Form A auxiliary switches rated up to 1A 24V
- ISO5211-compliant mounting with double square female drive inserts
- Raised visual position indicator
- Clutch-free manual override handwheel standard
- NEMA 4/4X and IP67 compliant

- Two (2) ¾ in EMT entry ports with sealed cable glands
- Torque switches standard

Options

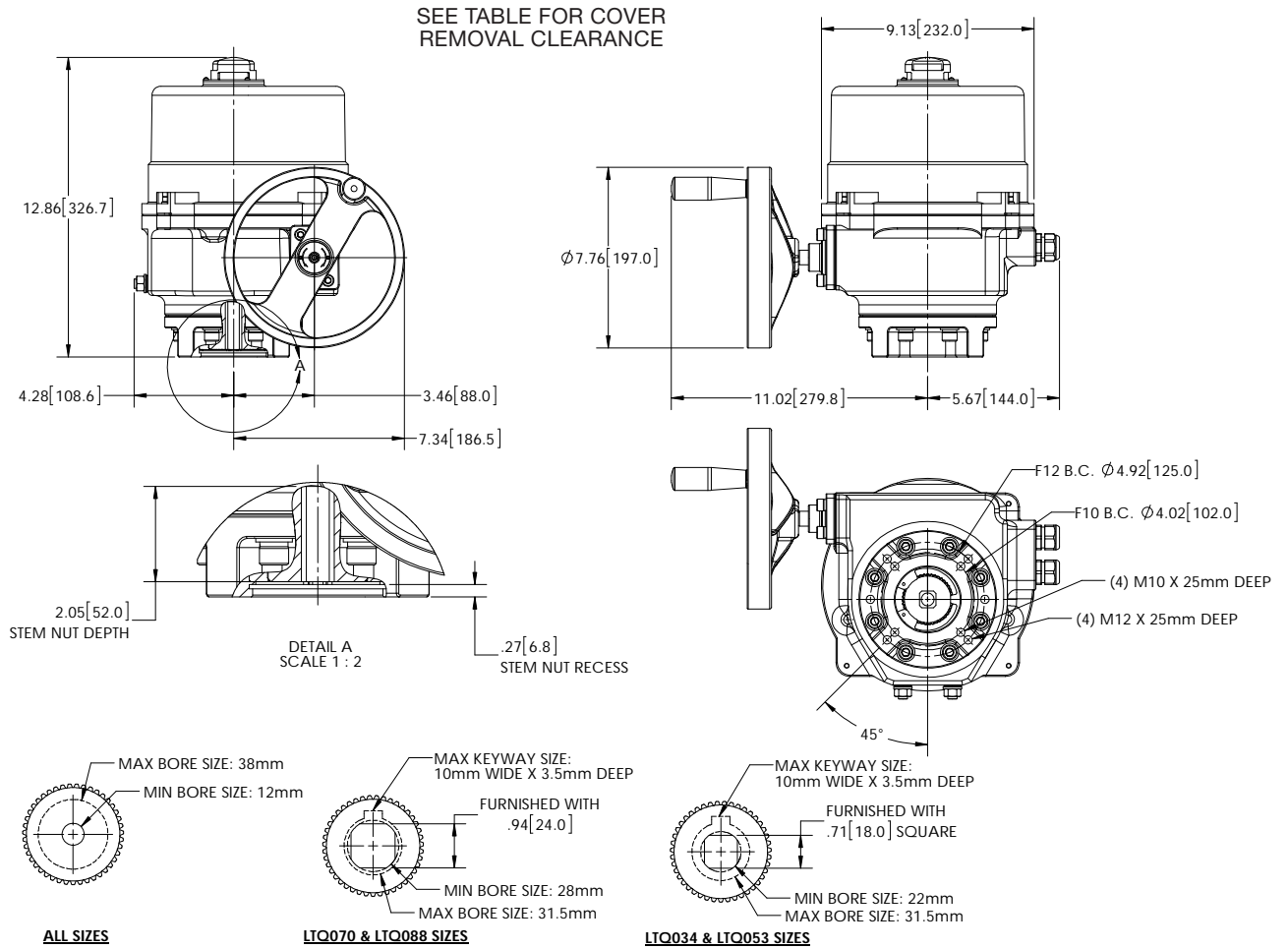
- Motor control centers
- Local control stations
- IP68 submersion
- Battery backup
- Interchangeable ISO5211 flange and drives
- Two-, three- and four-wire control available



Technical information

Actuator Specifications		LTQ034	LTQ053	LTQ070	LTQ088
Supply	Torque Output (Nm / in-lb)	3,540 / 400	5,310 / 600	7,080 / 800	8,850 / 1,000
220/3PH	Current Draw (Start / Run / LRA)	1.8 / 1.1 / 2.4	1.8 / 1.1 / 2.4	1.8 / 1.1 / 2.4	1.8 / 1.1 / 2.4
	Speed (90°) DC-60Hz/50Hz, Seconds	24 / 29	33 / 39	33 / 39	39 / 47
	Motor - 220V Polyphase TENV	90W	90W	90W	90W
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)		
Motor Protection, Temp / Class		155°C (311°F) / Class F / 180°C (356°F) / Class H			
Motor Starts, per hour, Max		All - 600			
380/3PH	Current Draw (Start / Run / LRA)	1.1 / 0.6 / 1.4	1.1 / 0.6 / 1.4	1.1 / 0.6 / 1.4	1.6 / 0.8 / 1.9
	Speed (90°) DC-60Hz/50Hz, Seconds	24 / 29	33 / 39	39 / 47	39 / 47
	Motor - 380V Polyphase TENV	90W	90W	90W	120W
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)		
Motor Protection, Temp / Class		155°C (311°F) / Class F / 180°C (356°F) / Class H			
Motor Starts, per hour, Max		All - 600			
480/3PH	Current Draw (Start / Run / LRA)	0.7 / 0.4 / 1.0	0.7 / 0.4 / 1.0	0.7 / 0.4 / 1.0	0.9 / 0.5 / 1.1
	Speed (90°) 60Hz / 50Hz, Seconds	24 / 29	33 / 39	39 / 47	39 / 47
	Motor - 480V Polyphase TENV	90W	90W	90W	120W
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)		
Motor Protection, Temp / Class		155°C (311°F) / Class F / 180°C (356°F) / Class H			
Motor Starts, per hour, Max		All - 600			
575/3PH	Current Draw (Start / Run / LRA)	0.4 / 0.3 / 0.8	0.4 / 0.3 / 0.8	0.4 / 0.3 / 0.8	0.8 / 0.4 / 0.9
	Speed (90°) 60Hz / 50Hz, Seconds	24 / 29	33 / 39	39 / 47	39 / 47
	Motor - 575V Polyphase TENV	90W	90W	90W	120W
	On/Off - Std Duty	Duty Cycle (IEC60034)	25% (S2-15 min)		
Motor Protection, Temp / Class		155°C (311°F) / Class F			
Motor Starts, per hour, Max		600			
All	Environmental Rating	NEMA 4/4X and IP67			
	Electrical Entry (2)	¾ in EMT or Polyamide Gland			
	Control	On/Off, Proportional, 2 Pos RO, RC and Three-position			
	Auxiliary Switch - End of Travel	(4) Form A Volt-Free, Rated 1A @ 24V			
	Ambient Operating Range	-30°C to 70°C (-22°F to 158°F)			
	Humidity Range	0 to 95% RH			
Altitude Limit	3,000 m (9,850 ft)				

*575/3PH versions available custom orders for select frame sizes.



Technical information (cont'd.)

Cover Removal Clearance		Handwheel		Weight
Model	mm/in	mm/in	# Turns for 90°	kg/lb
LTQ034 - LTQ088	200/8	197/7.76	14.5 turns 90°	22/49

LTQ150 Series on/off/proportional electric actuators (1PH and DC)

Overview

The LTQ150 Series quarter-turn electric industrial service actuators deliver up to 20,350 in-lb torque in voltages ranging from 24V up through 230V in on/off or proportional control modes. Other key features include:

- Units are equipped with four (4) volt-free Form A auxiliary switches rated up to 1A 24V
- ISO5211-compliant mounting with double square female drive inserts
- Raised visual position indicator
- Clutch-free manual override handwheel standard
- NEMA 4/4X and IP67 compliant

- Two (2) ¾ in EMT entry ports with sealed cable glands
- Torque switches standard

Options

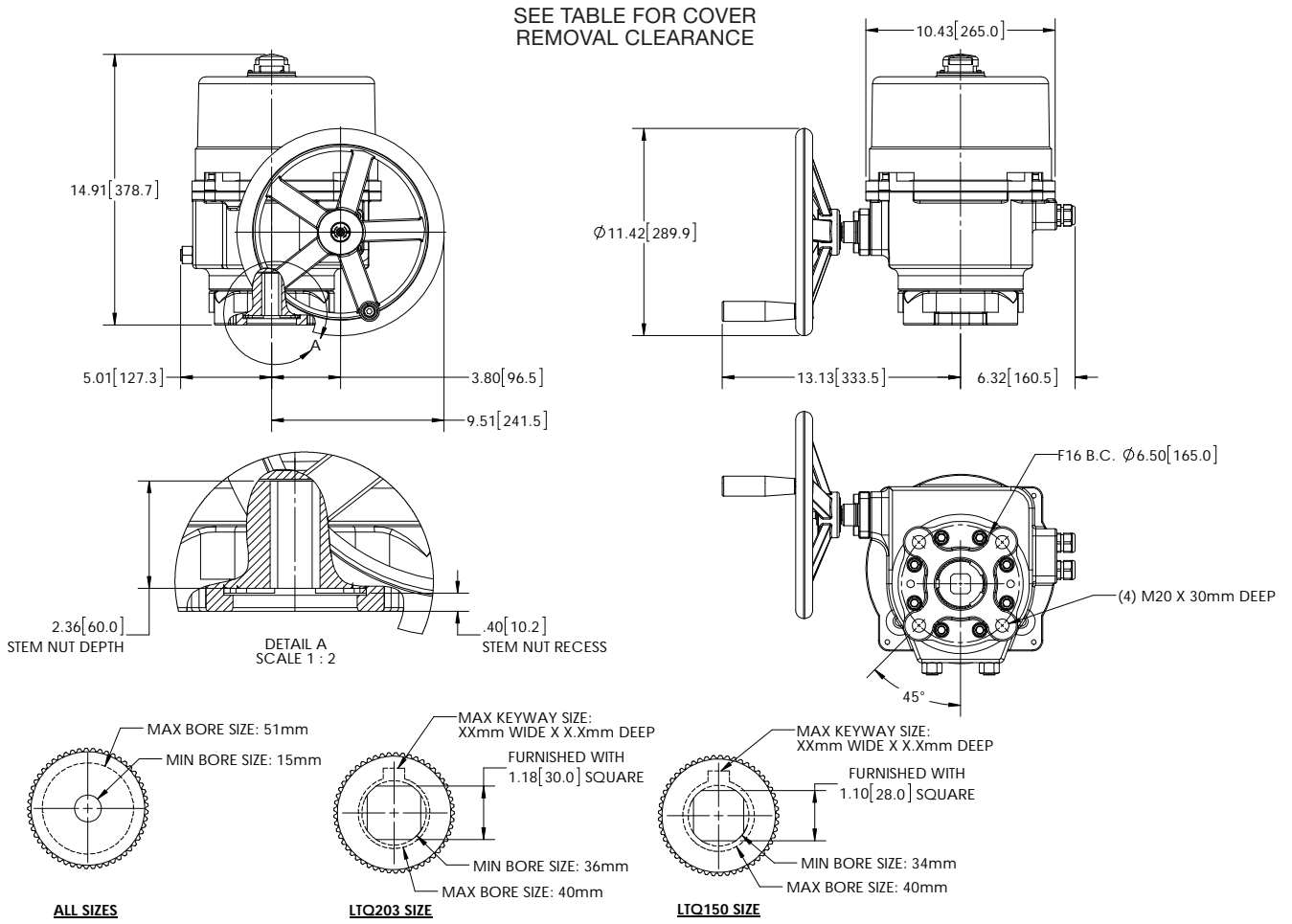
- Motor control centers
- Local control stations
- IP68 submersion
- Interchangeable ISO5211 flange and drives
- Two-, three- and four-wire control available



Technical information

Actuator Specifications		LTQ150	LTQ203	
Supply	Torque Output (Nm / in-lb)	1,700 / 15,040	2,300 / 20,350	
12VAC*- 12VDC*	Current Draw (Start / Run / LRA)	-	-	
	Speed (90°) DC-60Hz/50Hz, Seconds	-	-	
	Motor - 12V DC Brush TENV	-	-	
	On/Off / Proportional	Duty Cycle (IEC60034)	-	-
		Motor Protection, Temp / Class	-	-
Motor Starts, per hour, Max		-	-	
24VAC- 24VDC	Current Draw (Start / Run / LRA)	10.5A / 7.8A / 22A	-	
	Speed (90°) DC-60Hz/50Hz, Seconds	25 / 25	-	
	Motor - 24V DC Brush TENV	90W	-	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 75% (S4-75%)	-
		Motor Protection, Temp / Class	All - 130°C (266°F) / Class B	-
Motor Starts, per hour, Max		All - 600	-	
120VAC	Current Draw (Start / Run / LRA)	7.2A / 4.5A / 9.4A	7.2A / 4.5A / 9.4A	
	Speed (90°) 60Hz / 50Hz, Seconds	28 / 34	39 / 47	
	Motor - 120V Capacitor Run TENV	200W	200W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 50% (S4-50%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
230VAC	Current Draw (Start / Run / LRA)	4.1A / 2.2A / 4.5A	4.1A / 2.2A / 4.5A	
	Speed (90°) 60Hz / 50Hz, Seconds	28 / 34	39 / 47	
	Motor - 230V Capacitor Run TENV	200W	200W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 50% (S4-50%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
All	Environmental Rating	NEMA 4/4X and IP67		
	Electrical Entry (2)	¾ in EMT or Polyamide Gland		
	Control	On/Off, Proportional, 2 Pos RO, RC and Three-position		
	Auxiliary Switch - End of Travel	(4) Form A Volt-Free, Rated 1A @ 24V		
	Ambient Operating Range	-30°C to 70°C (-22°F to 158°F)		
	Humidity Range	0 to 95% RH		
	Altitude Limit	3,000 m (9,850 ft)		

*12V versions available custom order



Technical information (cont'd.)

Cover Removal Clearance		Handwheel		Weight
Model	mm/in	mm/in	# Turns for 90°	kg/lb
LTO150 - LTO203	250/10	290/11.5	16 turns 90°	36/80

LTQ150 Series on/off/proportional electric actuators (3PH)

Overview

The LTQ150 Series quarter-turn electric industrial service actuators deliver up to 20,350 in-lb torque in voltages ranging from 24V up through 230V in on/off or proportional control modes. Other key features include:

- Units are equipped with four (4) volt-free Form A auxiliary switches rated up to 1A 24V
- ISO5211-compliant mounting with double square female drive inserts
- Raised visual position indicator
- Clutch-free manual override handwheel standard
- NEMA 4/4X and IP67 compliant

- Two (2) 3/4 in EMT entry ports with sealed cable glands
- Torque switches standard

Options

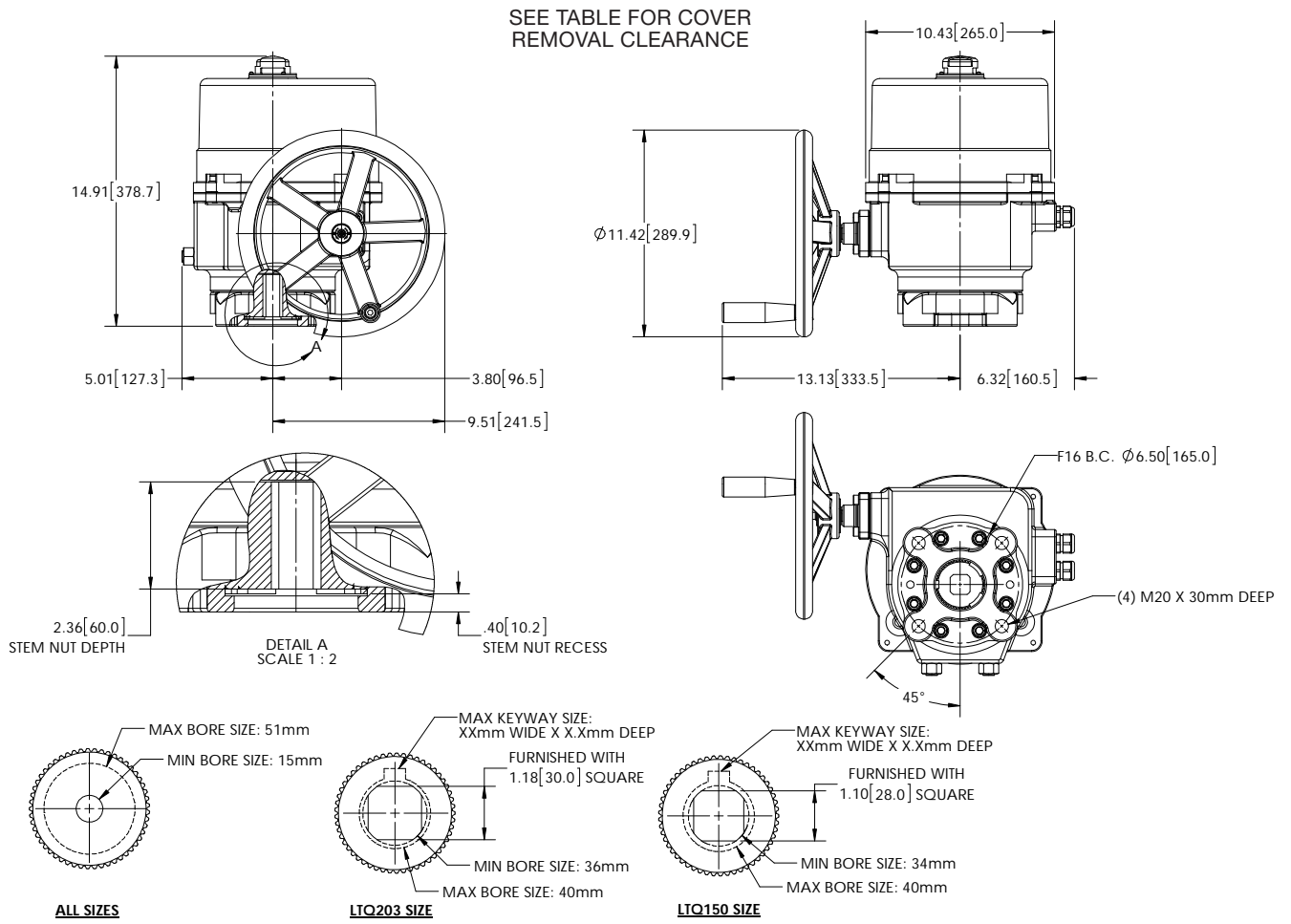
- Motor control centers
- Local control stations
- IP68 submersion
- Interchangeable ISO5211 flange and drives
- Two-, three- and four-wire control available



Technical information

Actuator Specifications		LTQ150	LTQ203	
Supply	Torque Output (Nm / in-lb)	1,700 / 15,040	2,300 / 20,350	
220/3PH	Current Draw (Start / Run / LRA)	3.6A / 1.9A / 4.5A	3.6A / 1.9A / 4.5A	
	Speed (90°) DC-60Hz/50Hz, Seconds	28 / 34	39 / 47	
	Motor - 220V Polyphase TENV	200W	200W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 50% (S4-50%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
380/3PH	Current Draw (Start / Run / LRA)	2.1A / 1.1A / 2.6A	2.1A / 1.1A / 2.6A	
	Speed (90°) DC-60Hz/50Hz, Seconds	28 / 34	39 / 47	
	Motor - 380V Polyphase TENV	200W	200W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 50% (S4-50%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
480/3PH	Current Draw (Start / Run / LRA)	1.2A / 0.9A / 2.1A	1.2A / 0.9A / 2.1A	
	Speed (90°) 60Hz / 50Hz, Seconds	28 / 34	39 / 47	
	Motor - 480V Polyphase TENV	200W	200W	
	On/Off / Proportional	Duty Cycle (IEC60034)	25% (S2-15 min) / 50% (S4-50%)	
		Motor Protection, Temp / Class	155°C (311°F) / Class F / 180°C (356°F) / Class H	
Motor Starts, per hour, Max		All - 600		
575/3PH	Current Draw (Start / Run / LRA)	1.0A / 0.7A / 1.9A	1.0A / 0.7A / 1.9A	
	Speed (90°) 60Hz / 50Hz, Seconds	28 / 34	39 / 47	
	Motor - 575V Polyphase TENV	200W	200W	
	On/Off - Basic	Duty Cycle (IEC60034)	25% (S2-15 min)	
		Motor Protection, Temp / Class	155°C (311°F)	
Motor Starts, per hour, Max		600		
All	Environmental Rating	NEMA 4/4X and IP67		
	Electrical Entry (2)	3/4 in EMT or Polyamide Gland		
	Control	On/Off, Proportional, in Five Levels of Control and Protection (some limited applications)		
	Auxiliary Switch - End of Travel	(4) Form A Volt-Free, Rated 1A @ 24V		
	Ambient Operating Range	-30°C to 70°C (-22°F to 158°F)		
	Humidity Range	0 to 95% RH		
	Altitude Limit	3,000 m (9,850 ft)		

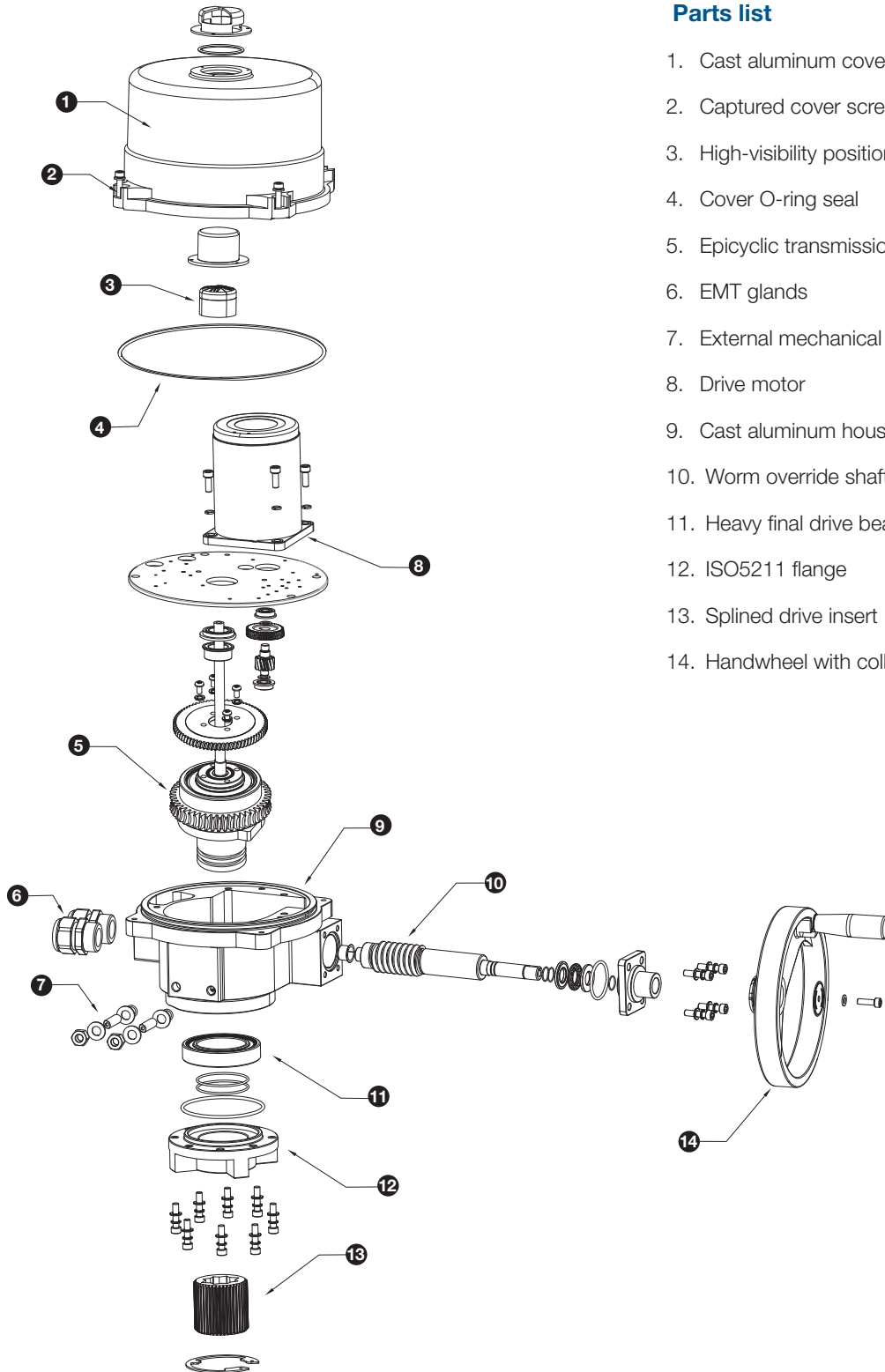
*12V versions available custom order



Technical information (cont'd.)

Cover Removal Clearance		Handwheel		Weight
Model	mm/in	mm/in	# Turns for 90°	kg/lb
LTQ150 - LTQ203	250/10	290/11.5	16 turns 90°	36/80

Exploded view (LTQ008 shown)



Parts list

1. Cast aluminum cover
2. Captured cover screws
3. High-visibility position indicator
4. Cover O-ring seal
5. Epicyclic transmission set
6. EMT glands
7. External mechanical stops
8. Drive motor
9. Cast aluminum housing
10. Worm override shaft
11. Heavy final drive bearing
12. ISO5211 flange
13. Splined drive insert
14. Handwheel with collapsible knob



Flowserve Corporation
5215 North O'Connor Blvd.
Suite 2300
Irving, Texas 75039-5421 USA
Telephone: +1 937 890 5839

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