

# VALVCON

## LCU-SERIES ELECTRIC VALVE ACTUATORS

### FEATURES

Metso's Valvcon LCU Series electric actuator is a proven performer for on/off (open/close) valve and damper control. Combining low cost with an extremely high cycle life, LCU Series actuators are a truly cost-effective, reliable solution to your simple valve actuation needs. Easy to install, with no ongoing maintenance required, LCU Series actuators are ideally suited for OEM applications. They are designed to supply years of trouble-free actuation.

### Efficient, Consistent Performance

LCU actuators are designed for valve applications that require single direction actuation – usually small ball valves two inches and under. A shaded-pole motor is used in 24, 115 or 230 volt AC applications.

The design of the LCU actuator makes it one of the most cost-effective units on the market today. Three units produce breakaway torque from 150 to 600 in-lbs. And because Metso's Valvcon electric actuators are reliable and inherently low maintenance units (compared with pneumatic alternatives), you'll realize long-term efficiencies beyond the initial low price.

### Strength in Design and Engineering

Inside the LCU actuator, the simplicity of design provides greater accessibility and actually makes wiring installation easier. The hardened steel spur gear drive train is remarkably efficient, resulting in consistent performance and long life in on/off applications.

The LCU cover is manufactured from an extremely strong PVC composite material that is resistant to damage and ultraviolet radiation. The enclosure is weatherproof and features a standard ISO-5211 mounting configuration. The low-profile design and direct drive male output make the LCU perfect for applications within limited space environments. Metso also provides a full two year warranty on all mechanical components.

### The Future of Valve Actuation

Find out why Metso is looking toward the future by setting new performance standard in the electric valve actuator industry. Metso would like to become a part of your future. For more details, contact your local representative.

### LCU OPTIONS

#### Option H – Tropical Heater/Thermostat

The tropical heater and thermostat option is a chassis-mount resistant heater which contacts the motor support plate. It is wired into the existing 12-position terminal block and is recommended in humid environments and those that experience wide temperature swings in order to evaporate any condensation. The thermostat is pre-set to activate at 90°F, (33°C) and deactivate at 110°F, (44°C). The heaters draw approximately 15 watts at all voltages.



*Metso's Valvcon LCU actuator is the low-cost solution for simple on/off application.*

#### Option L – Female Output

LCU Series actuators with the L option are equipped with a 14mm female square output drive instead of the standard male square output drive. The female drive option allows for direct mounting to some valves (see dimensions for further information).

#### Option S1 – Auxiliary Limit Switch

One extra switch and cam may be added to LCU Series actuators to provide a dry contact. The switch is fully adjustable to trip at any position. They are often used for position indication or to interlock other devices (such as in sequencing operations). The switches are single pole, double throw switches rated for 1/2 HP, 15 amps @ 250VAC, CSA certified. Auxiliary switch kit P/N 9000LU is universal to all LCU Series.

#### Option T – Heater/Thermostat

The heater and thermostat option is a chassis-mount resistant heater which contacts the motor support plate. It is wired into the existing 12-position terminal block and is required in installations where the ambient temperatures drop below 32°F, (0°C). The thermostat is pre-set to activate at 40°F, (5°C) and deactivate at 60°F, (16°C). The heaters draw approximately 15 watts at all voltages.

**Specifications**

Actuator Model	Breakaway Torque in-lbs	Voltage	Duty Cycle	Speed Seconds (90°)	AMPS - Running			Approx. Weight
					24VAC	115VAC	230VAC	
LCU150	150	24VAC 115VAC or 230VAC	25%	5	6.5	1.5	0.9	6 lbs
LCU300	300			10	6	1.5	0.9	
LCU600	600			21	5.5	1.5	0.9	
					AMPS - Running			
					12VDC	24VDC		
LCU150	150	12VDC or 24VDC	80%	6	2.0	1.0		
LCU300	300			6	2.0	1.0		
LCU600	600			15	2.0	1.9		

<p><b>LCU Options:</b>                  H- Tropical Heater/Thermostat;                  S1- Additional Limit Switch;                  T- Heater and Thermostat;                  L- Female Output</p>	<p><b>Temperature Limits:</b>                  (all models): -40°F (with heater and thermostat) to 150°F (max.)                   Lubrication: Permanently lubricated gear train and bearings                   Conduit Connection: 1/2" - 14 NPT</p>	<p>Output Shaft: Male, Zinc plated steel                  Female (optional)                   Cover: Composite, PVC                  Base: Diecast Zinc alloy                  Enclosure: Designed for NEMA 4/4X                  Finish: Powder coated epoxy</p>
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**How to Order - LCU Series Electric Actuators**

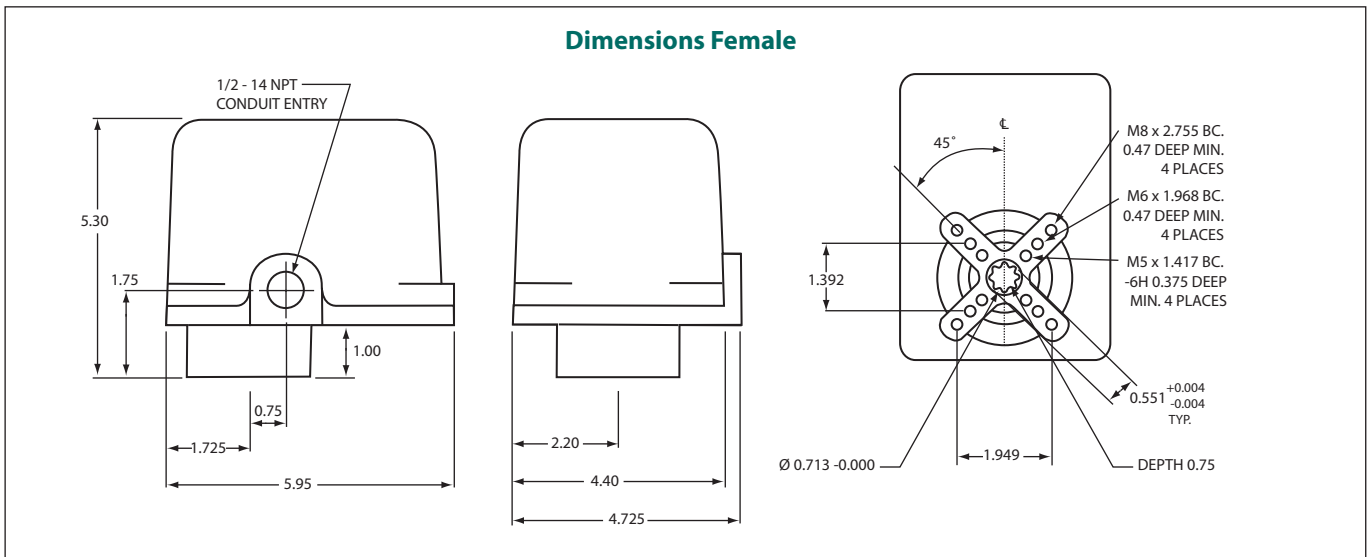
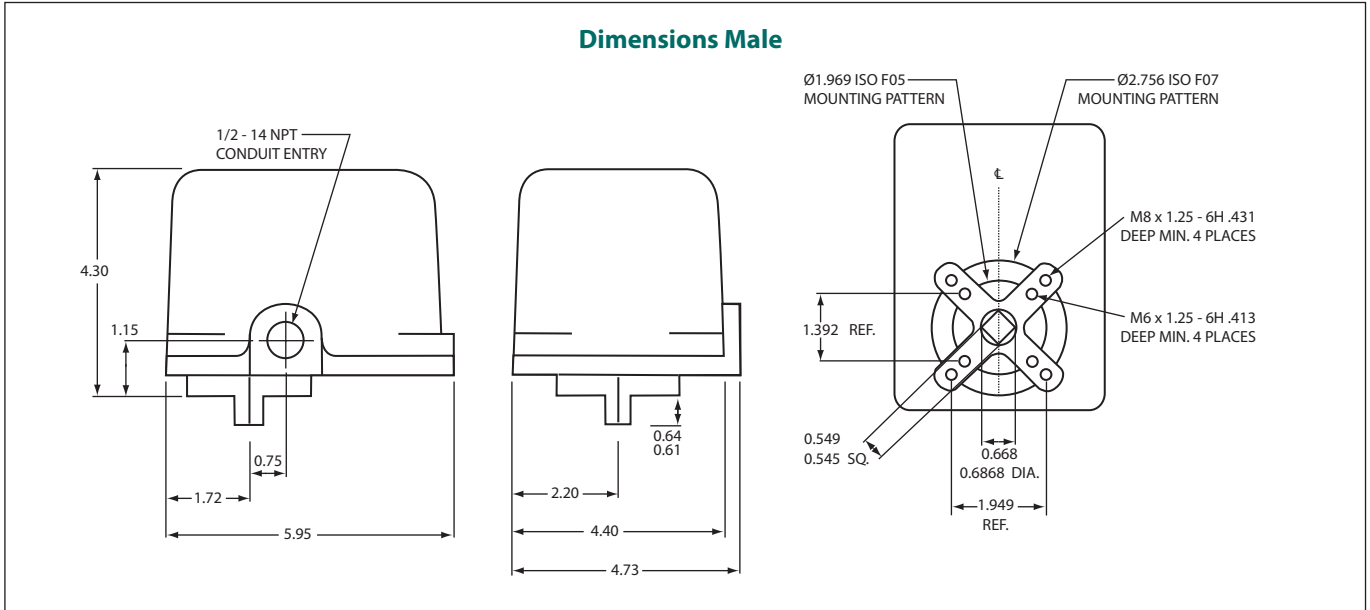
Actuator Series	Torque		Options		Operating Voltage	
Order Code	Order Code	Description	Order Code	Description	Order Code	Description
<b>LCU</b>	<b>150</b>	150 in-lbs	<b>H<sup>1</sup></b>	Tropical Heater/Thermostat	<b>S115AC</b>	115VAC
	<b>300</b>	300 in-lbs	<b>L<sup>2</sup></b>	Female Output	<b>S230AC</b>	230VAC
	<b>600</b>	600 in-lbs	<b>S1</b>	One Auxiliary Limit Switch	<b>S24AC</b>	24VAC
			<b>T<sup>3</sup></b>	Heater/Thermostat	<b>S12DC</b>	12VDC
					<b>S24DC</b>	24VDC

- Notes:**
1. This heater option activates at or below 90°F and deactivates at 110°F; it is recommended in high-humidity applications.
  2. LCU Series actuators with L option are supplied with a 14mm female double square output (note that the standard output is a 14mm male square).
  3. This heater option activates at or below 40°F and deactivates at 60°F; it is recommended in applications where the temperature may drop below 32°F.

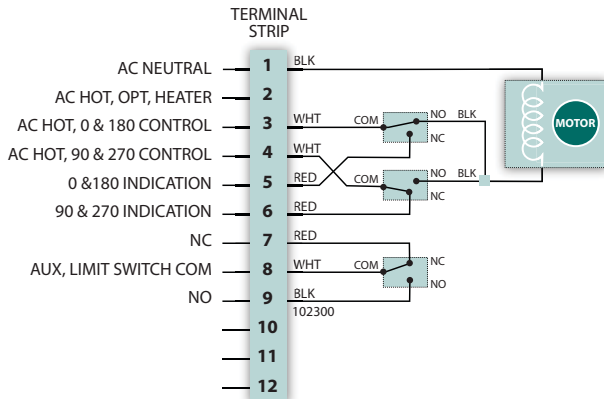
**Sample Model Code: LCU600S1TS230AC**

Actuator Series	<b>LCU</b>
Torque	<b>600</b>
Options (if applicable)	<b>S1 T</b>
Operating Voltage	<b>S230AC</b>

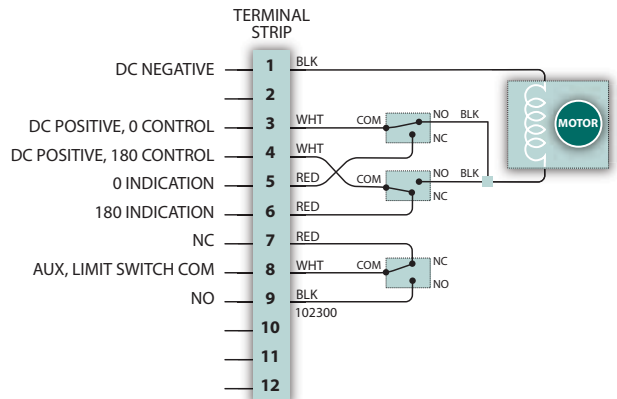
**ALL DIMENSIONS ARE SHOWN IN INCHES**



**LCU Wiring AC**



**LCU Wiring DC**



### Committed to Customer Service

Metso's web site, [www.metso.com/automation/valvcon](http://www.metso.com/automation/valvcon), provides 24 hour a day worldwide access to all technical support material – from sales brochures to instruction manuals to installation and troubleshooting tips. For local support, our network of trained stocking distributors/representatives are industry leading experts in valve automation. Contact Metso's Valvcon product web site to locate the nearest stocking distributor/representative.

### Timely Technical Support

Metso is on call to answer your engineering or application questions, and to quickly repair or upgrade your actuators. These highly trained support engineers offer a broad range of expertise, with the combined experience to assist specifying engineers and contractors with information on feasibility and special applications. You can find more information on Valvcon electric actuators from Metso at [www.metso.com/automation/valvcon](http://www.metso.com/automation/valvcon).

### A Tradition of Quality

Metso is dedicated to producing superior quality products that are second to none. Our development laboratory and manufacturing facilities exemplify our total commitment to producing quality products.



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