

# VALVCON

## LCR-SERIES ELECTRIC VALVE ACTUATORS

### FEATURES

Metso's Valvcon LCR 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, the LCR Series actuators are a truly cost-effective, reliable solution to your simple valve actuation needs.

Easy to install, with no ongoing maintenance required, LCR Series actuators are ideally suited for OEM applications. They are designed to supply years of trouble-free actuation.

### Efficient, Consistent Performance

A powerful split phase reversing AC motor drives the LCR to produce breakaway torque from 150 to 600 in-lbs. DC motors are also available.

The design of the Valvcon LCR actuator makes it one of the most cost-effective units on the market today. 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.

All LCR Series actuators include a holding brake to prevent back driving in butterfly valve, damper and resilient-seated ball valve applications.

### Strength in Design and Engineering

Inside the LCR actuator you'll find a terminal strip with 12 wiring locations. 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 manual override is declutchable for positive override ability. And an absolute position indicator may be located on the shaft for easy reading.

The LCR 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 LCR 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 standards in the electric valve actuator industry. Metso would like to become a part of your future. For more details, contact your representative.

### LCR OPTIONS

#### Option F – Position Indicator

LCR Series actuators can be ordered with a visual position indicator. This option consists of an arrow that mounts outside the cover, on the override shaft, and is visible from a distance and shows actuator position.



*Metso's Valvcon LCR actuator is a cost-effective solution to 0 – 90° or 180° reversing actuation applications.*

#### 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.

#### Option L – Female Output

LCR 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 S2 – Auxiliary Limit Switches

Two extra switches may be added to LCR Series actuators to provide dry contacts; they are fully adjustable to trip at any position. The switches 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 9000LR is universal to all LCR 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	
LCR150	150	24VAC 115VAC or 230VAC	25%	7	2.5	0.9	0.5	6 lbs
LCR300	300			14	2.8	0.9	0.5	
LCR600	600			21	2.5	0.9	0.5	
				<b>AMPS - Running</b>				
					12VDC	24VDC		
LCR150	150	12VDC or 24VDC	80%	6	2.0	1.0		
LCR300	300			6	2.0	1.0		
LCR600	600			15	2.0	1.9		

<b>LCR Options:</b> F - Position Indicator; H - Tropical Heater/Thermostat; L - Female Output; S2 - Two Additional Limit Switches; T - Heater and Thermostat	<b>Temperature Limits:</b> (all models): -40°F (with heater and thermostat) to 150°F (max.)	Override: Standard, Zinc plated steel 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
	Lubrication: Permanently lubricated gear train and bearings	
	Conduit Connection: 1/2" - 14 NPT	
	Declutchable Override: Standard	

**How to Order - LCR Series Electric Actuators**

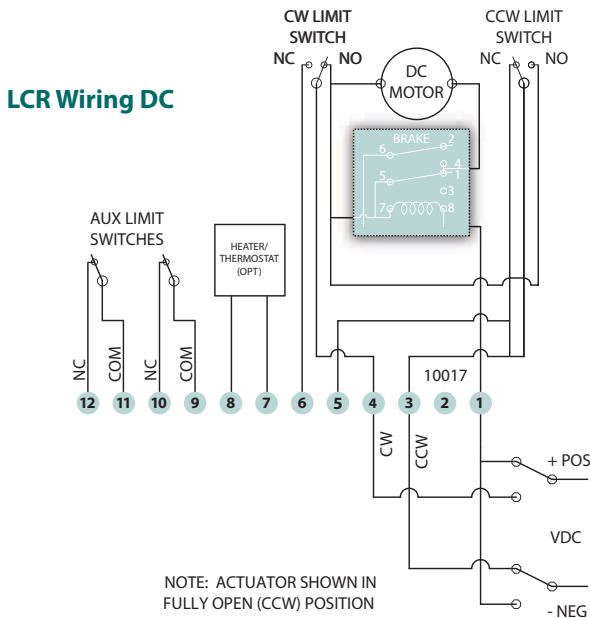
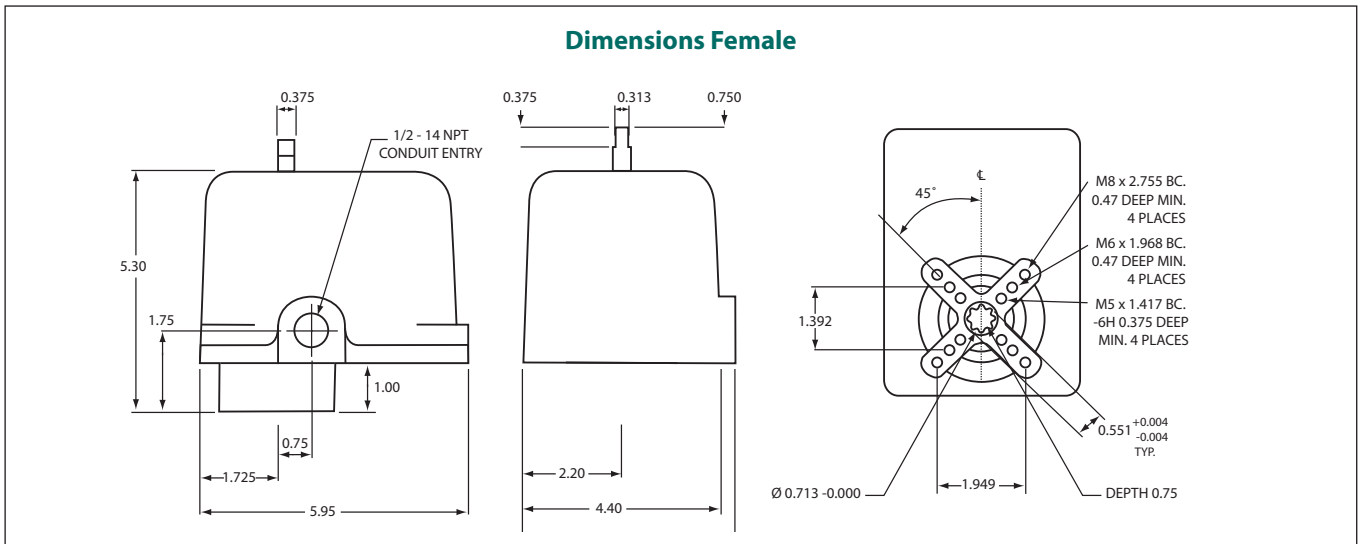
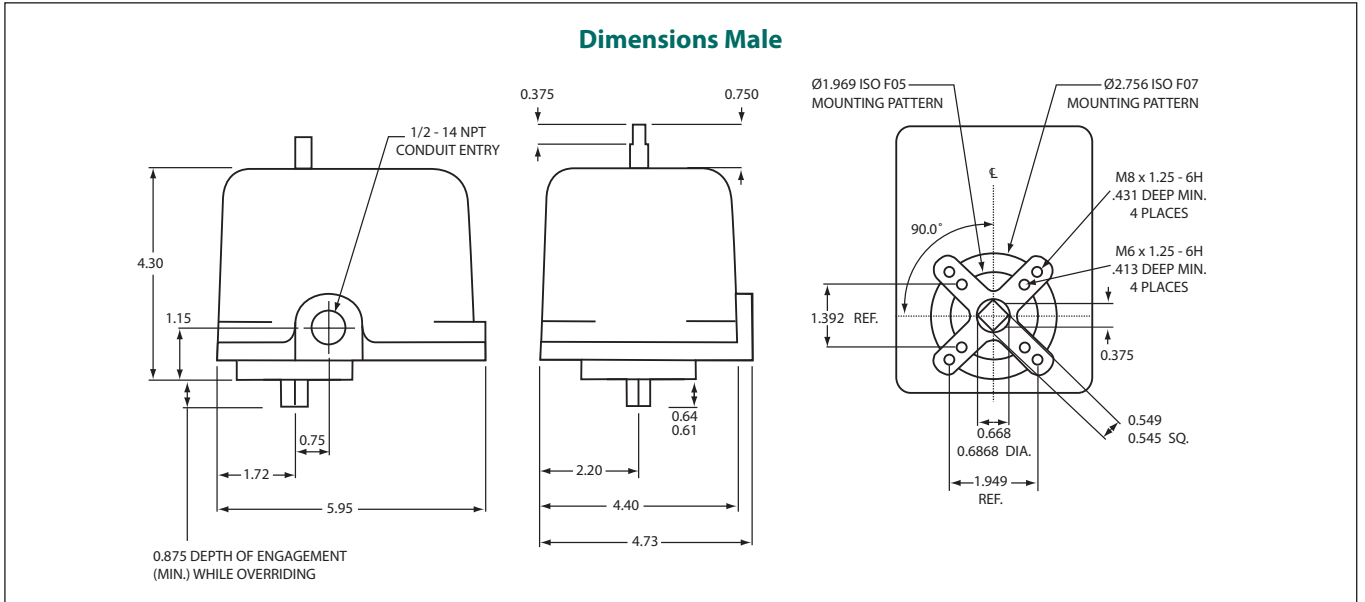
Actuator Series	Torque		Options		Operating Voltage	
Order Code	Order Code	Description	Order Code	Description	Order Code	Description
<b>LCR</b>	<b>150</b>	150 in-lbs	<b>F</b>	Position Indicator	<b>S115AC</b>	115VAC
	<b>300</b>	300 in-lbs	<b>H<sup>1</sup></b>	Tropical Heater/Thermostat	<b>S230AC</b>	230VAC
	<b>600</b>	600 in-lbs	<b>L<sup>2</sup></b>	Female Output	<b>S24AC</b>	24VAC
			<b>S2</b>	Two Auxiliary Limit Switches	<b>S12DC</b>	12VDC
			<b>T<sup>3</sup></b>	Heater/Thermostat	<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. LCR 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.

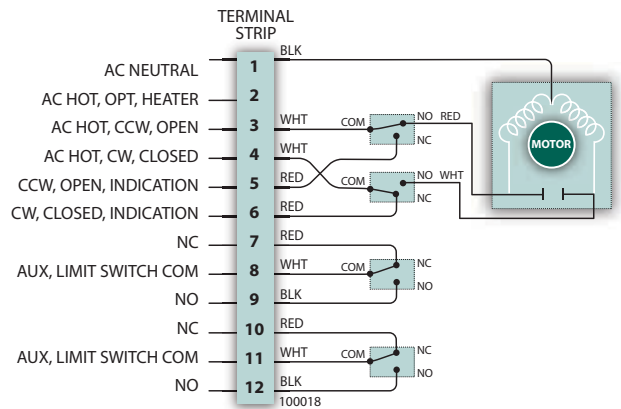
**Sample Model Code: LCR300LS2TS24AC**

Actuator Series	<b>LCR</b>
Torque	<b>300</b>
Options (if applicable)	<b>L, S2, T</b>
Operating Voltage	<b>S24AC</b>

**ALL DIMENSIONS ARE SHOWN IN INCHES**



### LCR Wiring AC



### **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.



**Corporate Office** Levytie 6, P.O. Box 310, 00811 Helsinki, Finland, tel. +358 20 483 150, fax +358 20 483 151

**North America Corporate Office** 44 Bearfoot Road, Northborough, Massachusetts, 01532 U.S.A., tel. +1 508 852 0200, fax +1 508 393 0978  
44 Bowditch Drive, P.O. Box 8044, Shrewsbury, Massachusetts, 01545-8044 U.S.A., tel. +1 508 852 0200, fax +1 508 852 8172

**Europe** 6-8 rue du Maine, 68271 Wittenheim Cedex, France, tel. +33 (0)3 89 50 64 00, fax +33 (0)3 89 50 64 40

**Latin America** Av. Independência, 2500-Iporanga, 18087-101, Sorocaba-São Paulo, Brazil, tel. +55 15 2102 9700, fax +55 15 2102 9748/49

**Middle East** Jebel Ali Freezone, P.O. Box 17175, Dubai, United Arab Emirates, tel. +971 4 883 6974, fax +971 4 883 6836

**Asia Pacific** 238A Thomson Road, #25-09 Novena Square Tower A, 307684 Singapore, tel. +65 6511 1011, fax +65 6250 083

[www.metso.com/automation](http://www.metso.com/automation)