

DIRECT-MOUNT COMPACT LINE ACTUATOR



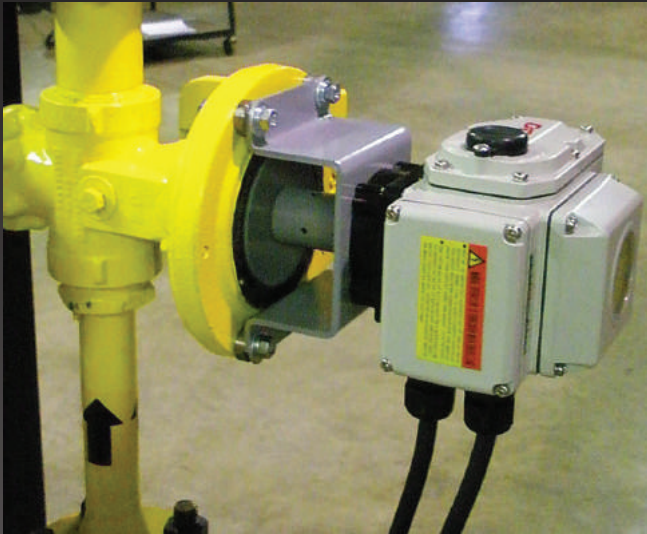
ERTL Combustion Products announces the new Direct-Mount Compact Line actuator. These actuators mount directly to the valve eliminating the inaccuracy associated with linkages. The DCL is constructed of high quality die cast aluminum using high-grade molybdenum lubricant for a long service life with minimal maintenance.



The DCL is extremely versatile and can be purchased for use with different power sources, control schemes, and time/torque combinations to meet a wide variety of requirements.



DLC ACTUATORS



The DCL mounts directly to the valve stem and the actuator bottom bolts directly to the valve platform, or a custom mounting bracket can be made to fit various applications.

The DCL comes standard with a turning angle of 0-90°. Custom ranges available upon request.



DCL 02 ACTUATOR PARAMETERS

Voltage	DC24V	AC110V	AC22V
Motor Power	8W	6W	6W
Rated Current	0.7A	0.3A	0.15A
Standard Time/Torque	15 Seconds/18Nm (1518) - 159 In-lbs		
Optional Time/Torque	07 Seconds / 09Nm (0709) - 80 In-lbs		
Optional Time/Torque	60 Seconds / 18Nm (6018) - 159 In-lbs		
Control Circuit	Circuit B, G (see page 7)		
Shaft Size	9mm, 11mm Square		
Mounting Flange	F03, F04, F05		
Rotation	90° Standard. Custom ranges upon request		
Protection Class	IP 67 / NEMA 4		
Operating Temperature	-22° F -140° F (-30° C - 60° C)		

ORDERING YOUR DCL 02 ACTUATOR

DCL02 - D - 1518 - G - 11

Voltage

D=24V DC

E=110V AC

F=220V DC

Shaft Size

09-09x09mm

11-11x11mm

Time/Torque (0-360 Acting Time)

1518=15 Seconds / 18 Nm Torque (Standard) (159 In-lbs)

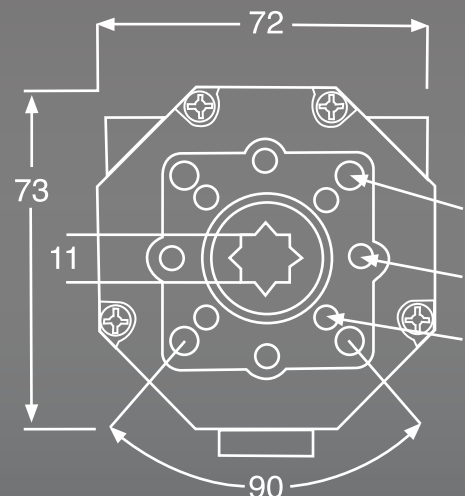
0709=07 Seconds / 09 Nm Torque (80 In-lbs)

6018=60 Seconds / 18 Nm Torque (159 In-lbs)

Control Circuit

B

G



DCL 05 ACTUATOR PARAMETERS

Voltage	DC24V	AC110V	AC220V
Motor Power	13W	10W	10W
Rated Current	1.28A	0.24A	1.16A
Standard Time/Torque	20 Seconds / 50Nm (2050) - 445 In-lbs		
Optional Time/Torque	04 Seconds / 20Nm (0420) - 177 In-lbs		
Optional Time/Torque	10 Seconds / 30Nm (1030) 265 In-lbs		
Optional Time/Torque	60 Seconds / 50Nm (6050) - 445 In-lbs		
Control Circuit	Circuit B, E, F, G (see page 7)		
Shaft Size	9mm, 11mm, 14mm Square		
Mounting Flange	F03, F05, F07		
Rotation	90° Standard. Custom ranges upon request		
Protection Class	IP 67 / NEMA 4		
Operating Temperature	-22° F- 140° F (-30° C-60° C)		

ORDERING YOUR DCL 05 ACTUATOR

DCL05 - E - 2050 - E - 11

Voltage

D = 24V DC
E = 110V AC
F = 220V AC

Shaft Size

09- 09x09mm
11- 11x11mm
14- 14x14mm

Time/Torque (0-360° Acting Time)

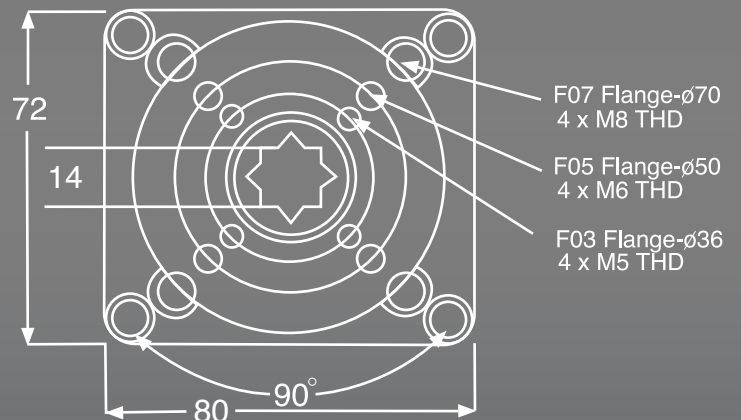
2050 = 20 Seconds / 50 Nm Torque (Standard) (445 In-lbs)
0420 = 04 Seconds / 20 Nm Torque (177 In-lbs)
1030 = 10 Seconds / 30 Nm Torque (265 In-lbs)
6050 = 60 Seconds / 50 Nm Torque (220V AC only) (445 In-lbs)

Control Circuit

B
E
F
G



Mounting Flange



DCL 05 ACTUATOR PARAMETERS

Voltage	DC24V	AC110V	AC220V
Motor Power	25W	25W	25W
Rated Current	2.03A	0.57A	0.35A
Standard Time/Torque	30 Seconds / 100Nm (30100) - 885 In-lbs		
Optional Time/Torque	15 Seconds / 50Nm (1550) - 445 In-lbs		
Optional Time/Torque	60 Seconds / 50Nm (6050) - 445 In-lbs		
Control Circuit	Circuit B, E, F, G (see page 7)		
Shaft Size	9mm, 11mm, 14mm Square		
Mounting Flange	F05, F07		
Rotation	90° Standard. Custom ranges upon request		
Protection Class	IP 67 / NEMA 4		
Operating Temperature	-22° F- 140° F -(30° C -60° C)		

ORDERING YOUR DCL 05 ACTUATOR

DCL05 - E - 2050 - E - 11

Voltage

D = 24V DC
E = 110V AC
F = 220V AC

Shaft Size

09-09x09mm
11-11x11mm
14-14x14mm

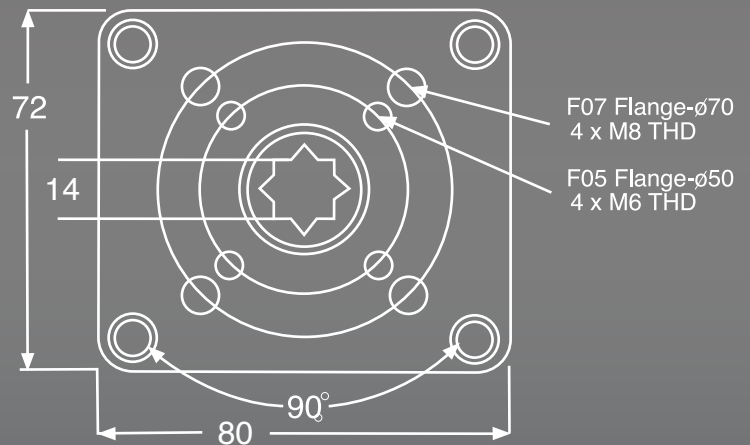
Time/Torque (0-360° Acting Time)

30100 = 30 Seconds / 100 Nm Torque (Standard) (885 In-lbs)
1550 = 15 Seconds / 50 Nm Torque (445 In-lbs)
050 = 60 Seconds / 50 Nm Torque (220V AC only) (445 In-lbs)

Control Circuit

B
E
F
G

Mounting Flange



DCL 20 ACTUATOR PARAMETERS

Voltage	DC24V	AC110V	AC220V
Motor Power	35W	40W	40W
Rated Current	3.57A	0.65A	0.37A
Standard Time/Torque	30 Seconds / 200Nm (15100) - 885 In-lbs		
Optional Time/Torque	15 Seconds / 100Nm (15500) -445 In-lbs		
Optional Time/Torque	60 Seconds / 50Nm (6050) - 445 In-lbs		
Control Circuit	Circuit B, E, F, G (see page 7)		
Shaft Size	14mm, 17mm Square		
Mounting Flange	F07, F10		
Rotation	90° Standard. Custom ranges upon request		
Protection Class	IP 67 / NEMA 4		
Operating Temperature	-22° F- 140° F (-30° C-60° C)		

ORDERING YOUR DCL 20 ACTUATOR

DCL 20 - E - 30200 - E - 14

Voltage

D = 24V DC
E = 110V AC
F = 220V AC

Shaft Size

14- 14x14mm
17- 17x17mm

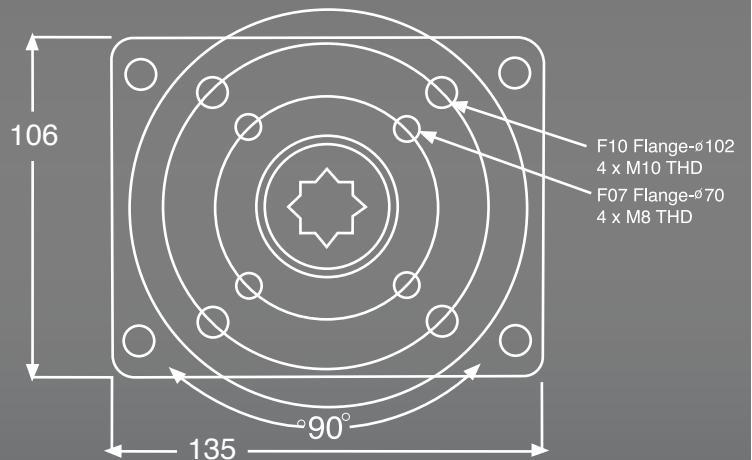
Time/Torque (0-360° Acting Time)

30200 = 30 Seconds / 200 Nm Torque (Standard) (1770 In-lbs)
15100 = 15 Seconds / 100 Nm Torque (885 In-lbs)
6050 = 60 Seconds / 50 Nm Torque (220V AC ONLY) (445In-lbs)

Control Circuit

B
E
F
G

Mounting Flange

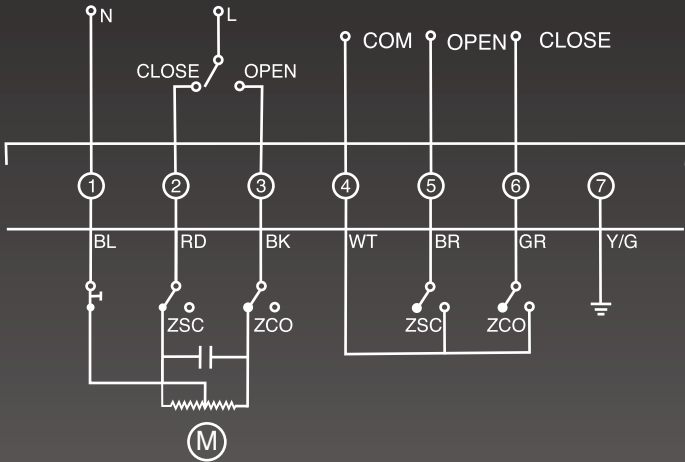


STANDARD CONTROL CIRCUIT OPTIONS

CIRCUIT B: DISCRETE CONTROL w/LIMIT SWITCHES
AC MOTOR, SINGLE PHASE

Customer Wiring

PIN	Neutral
1	AC power to close actuator
2	AC power to open actuator
3	Light switch common
4	Open Unit switch
5	Closed Unit switch signal

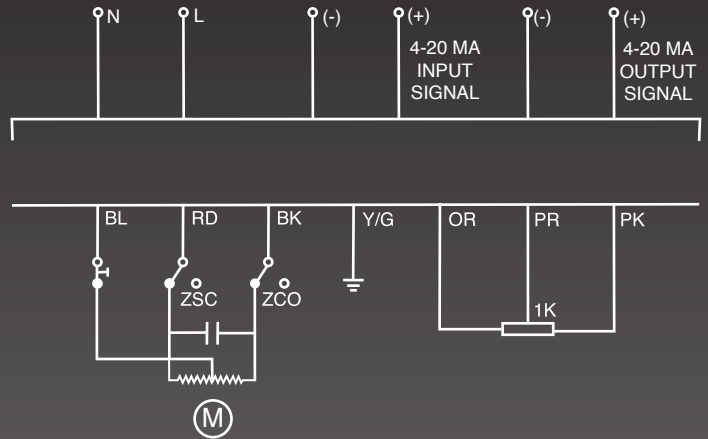


ACTUATOR MOTOR CIRCUIT

CIRCUIT E: 4-20mA CONTROL & POSITION FEEDBACK
AC MOTOR, SINGLE PHASE

Customer Wiring

PIN	
+ OUT	+ 4-20mA Feedback Loop
-OUT	- 4-20 mA Feedback Loop
+IN	+ 4-20mA Control Loop
-IN	- 4-20mA Control Loop
L	AC power
N	Neutral

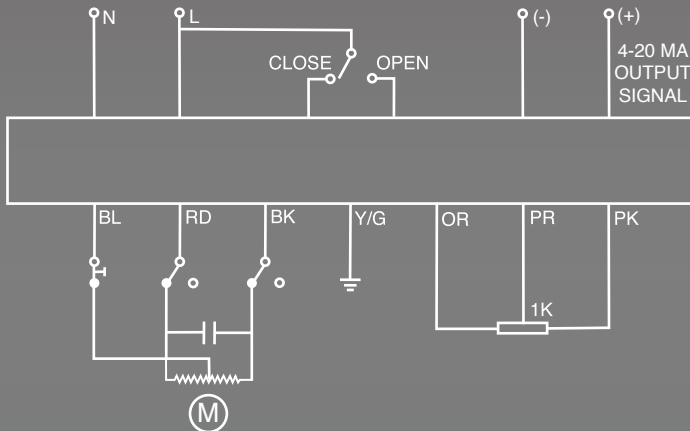


ACTUATOR MOTOR CIRCUIT

CIRCUIT F: DISCRETE CONTROL w/ 4-2mA POSITION
FEEDBACK AC MOTOR, SINGLE PHASE

Customer Wiring

PIN	
+ OUT	+ 4-20mA Feedback Loop
-OUT	- 4-20 mA Feedback Loop
CLOSE	AC power to close actuator
OPEN	AC power to open actuator
L	AC power
N	Neutral

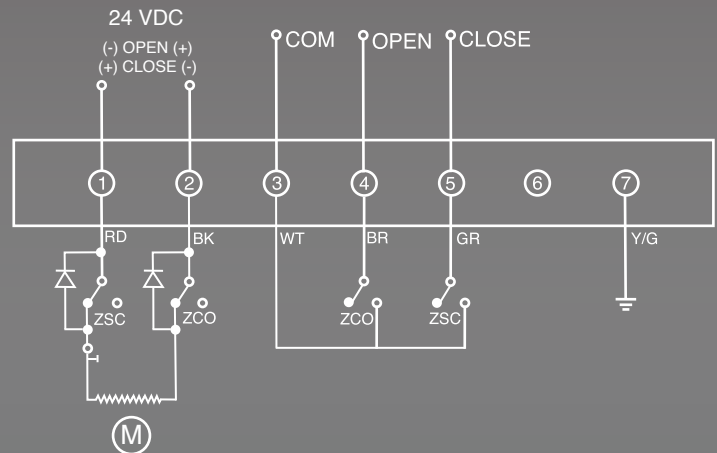


ACTUATOR MOTOR CIRCUIT

CIRCUIT G: DISCRETE CONTROL w/ LIMIT
SWITCHES DC MOTOR, SINGLE PHASE

Customer Wiring

PIN	
1	DC power for actuator
2	DC power for actuator
3	Limit switch common
4	Open Unit switch signal
5	Closed Unit switch signal



ACTUATOR MOTOR CIRCUIT

The DCL product line has several options to handle even greater torque requirements. They are widely used in various industrial fields such as the ferrous, non-ferrous, petroleum, chemical, power generation, and water treatment applications.

This compact series actuator is an ideal choice to electrically actuate ball valves and butterfly valves, used to control flow.



Electrically Actuated Ball Valve



Electrically Actuated Butterfly Valve



Electric Control Valve

Reference Chart

DCL Actuator Series	Butterfly Valve	Ball Valve
DCL 02	< 1 - 1/2"	< 1 - 1/4"
DCL 05	2" - 2-1/2"	1-1/2"
DCL 10	3" - 4"	2" - 2-1/2"
DCL 20	5" - 6"	3" - 4"
DCL 40*	8"	5"
DCL 60*	10"	6"
DCL 100*	12"	8"

Note: The data listed in the table above is for reference only. The actuator chosen shall be based on the torque values provided by valve manufacturer x 1.2 (for safety factor).

*Special Order