



Dodge Engineering & Controls, Inc.

Generation II *RE* Actuation Products



- Solid State Industrial Actuators with built-in current limiting
- Torque Range 150-10,200 in-lbs, field adjustable speed control (up to 2X standard speed)
- Optically isolated signal inputs
- LED diagnostic indicators standard, optional external alarm relays available
- UL/cUL File E253926



196 Riverneck Road, Chelmsford, MA 01824 USA
Toll Free 877-DEI-CTRL (877-334-2875)

Tel: 978-244-1200 Fax: 978-244-1422
www.DEIcontrols.com



Table 1
RE Series Industrial NEMA TYPE 4/4X Actuators
Torque: 150 In-Lb to 10,200 In-Lb

Technical Data	RE1.5F - RE8.5F	RE1.5G - RE8.5G	RE10F-RE30XF	RE10G - RE30XG
Power supply	12 VDC, 24 VAC or VDC, 120 VAC, 50/60 Hz, other options available			
Power Consumption	30 VA (Class 2 power source required)		56 VA (Class 2 power source required)	
Electrical connection	Dual conduit entry (1/2")		Dual conduit entry (3/4")	
Overload protection	Electronic - Solid State			
Control signal	Two-pos./tri-state* (floating)	0-10 VDC, 4-20 mA std., field adj.	Two-pos./tri-state* (floating)	0-10 VDC, 4-20 mA std., field adj.
Input impedance	250 Ohms for 4 - 20 mA			
Operating range	0 to 10 VDC, 2 to 10 VDC, 4 to 20 mA, custom signal ranges available			
Feedback output	0 to 10 VDC standard, 4 to 20 mA optional			
Angle of rotation	Typically 90°, Option: adjustable 65° to 320°			
Minimum torque	Depends on model - see Table			
Direction of rotation	Standard: increase signal = CCW (jumper selectable)			
Position indication	Visual mechanical position indicator			
Gear train	Heat treated metal gears, permanently lubricated			
Brakes	Solid State braking system (power not required)			
Manual override	De-clutching shaft with flats, optional override handwheel			
Duty cycle	100%			
Auxiliary switches	1 standard, up to 3 optional			
- Switch	Form C; SPDT			
- Range usage	0 - 320°			
- Factory setting	None			
- Ratings (Resistive)	- 125/250 VAC: 10 Amps, 1/3 hp - 12 VDC: 5.0 Amps; 30 VDC: 2.0 Amps Customs Available - Call Dodge Engineering			
Switch connections:	Male quick connect type tabs			
Control signal adjustment: (for modulating units)				
- Offset (startpoint)	-	0 - 3 VDC	-	0 - 3 VDC
- Factory setting		0 - 10 VDC or 4-20 mA		0 - 10 VDC or 4-20 mA
- Span		Adjustable		Adjustable
Running time (90°)(nominal)	Adjustable - See RE Series Industrial Actuators Table			
Humidity	95% RH, noncondensing			
Operating temperature†	-40°F to 150°F (-40°C to 65°C)			
Agency Compliance	UL 508 Listed, File E253925; cUL Certified to Canadian standard C22.2 No. 14-M91***			
Housing type	Type 4/4X according to UL, cUL			
Housing material	Cast aluminum, with exterior grade polyurethane enamel coating.			
Options:				
- Heater & thermostat †	For outdoor and moist environments			
- Override handwheel	Non-spoked for safety			
- Alarm relay	Output - rating 130 mA max., 9 - 130 VAC/DC			
Servicing	Maintenance free			
Weight	17 lbs		25 lbs ††	

Notes:

* Input signal range from 9 - 130 VAC or VDC. Use normal switched signals only (i.e. relay contacts or switches).

Do Not Use Triacs.

** Does not include line loss. Add 16 VA if heater and stat (H/S) is used.

*** Request certification at time of order.

† Optional heater and stat required for low temperatures, high humidity, extreme condensation or outdoor applications.

†† For "T" and "X" versions add 38 and 78 lbs respectively for the Torque Maximizer models.



Table 2

RE Series Industrial Actuators					
Actuator Model No.	Output Torque		Speed* sec./90°	Speed** sec./270°	Speed** sec./360°
	in-lb	N-m			
RE1.5	150	17	10 - 25	—	—
RE3†	300	34	10 - 25	—	—
RE6	600	68	10 - 25	—	—
RE8.5	850	96	10 - 25	—	—
RE10†	1000	114	35 - 70	—	—
RE15	1500	170	35 - 70	—	—
RE20	2000	227	35 - 70	—	—
RE25	2500	284	35 - 70	—	—
RE30	3000	340	35 - 70	—	—
RE15T**	3825	434	—	105 - 210	—
RE20T**	5100	579	—	105 - 210	—
RE25T**	6375	724	—	105 - 210	—
RE30T**	7650	869	—	105 - 210	—
RE30X**	10200	1158	—	—	140-280

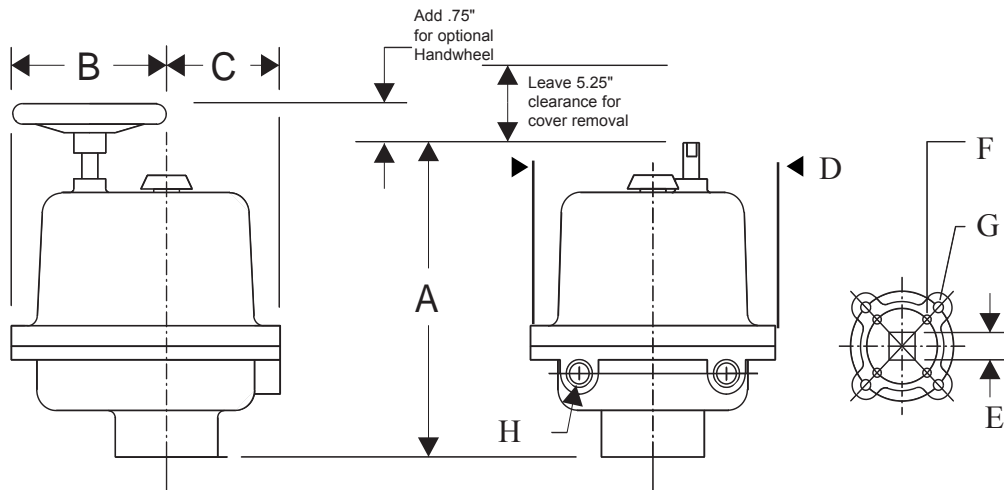


Table 3

RE Series Industrial Actuators Dimensions								
Actuator Model No.	Dimensions (Inches)							
	A	B	C	D	E	F	G	H
RE1.5 - RE8.5	9.93	5.15	3.48	7.42	0.75 sq. 0.63 deep	N/A	5/16-18UNC-2B 0.625 deep BC: 3.25	1/2" NPT
RE10 - RE30	11.65	6.07	4.40	9.75	1.00 sq. 2.00 deep	3/8-16UNC-2B 1.12 deep BC: 4.00	7/16-14UNC-2B 1.50 deep BC: 4.965	3/4" NPT

Notes:

- * Speed is adjustable and varies slightly with load.
- ** When using a Torque Maximizer, see page AC-11 in our DEI catalog for further details and requirements.
- † Faster speeds available. Please call DEI.



Features

Benefits

Solid state industrial 1/4 turn actuators with current limiting	Actuator stops and holds position when current setpoint is exceeded. Can continue to operate if driven in the opposite direction.
Field adjustable speed setting standard	Can slow speed of actuator by a factor of 2 (i.e. 90 degrees of rotation can be slowed from 35 seconds to 70 seconds).
Optically isolated signal inputs	Power and signal do not have to come from the same source (no more ground loop problems).
Inputs are not polarity sensitive for on/off or tri-state control	Positive and negative are interchangeable. Easier wiring, application and troubleshooting.
LED diagnostic indicators 2 end of travel and 2 torque related	Simple troubleshooting.
Standard 4 Amp knife blade standard automotive fuse	Commonly available.
True 100 % Duty Cycle	Requires no rest period between cycles.
Solid state braking system works with or without power (rated to 1-1/4 X torque)	Prevents valve or damper from drifting when power is absent. Not moisture sensitive. Elect./Mechanical brakes tend to be extremely sensitive to moisture and can lock up.
Heavy duty terminals for field interface	Fast, reliable field hook-up.
Designed with higher voltage electronic components	Reduces typical static and handling problems.
Automatic adjustment for damper or valve seal wear	Current limiting feature ensures positive close-off. Prevents jamming the damper or driving the valve too far into the seat.
Two-position control: Wide input signal voltage range (9 - 130 VAC or VDC)	Allows for long distance signal runs. Flexibility also allows for early commissioning.
Entire Actuator is UL508 and cUL C22.2 No. 14-M91 listed.	Meets rigid engineering specifications