

11280A High-torque Actuator

Improve Your Bottom Line

To operate with maximum efficiency and improve process uptime, state-of-the-art control systems require accurate, responsive, and repeatable actuation of final control devices. Actuators are often overlooked when considering maintenance and ancillary support costs, yet they play an important role in system performance and can directly impact your company's bottom line.

Honeywell's 11280A high-torque, industrially rated rotary actuator is engineered for exceptional reliability, accurate positioning, and low maintenance. The 11280A uniquely combines fast, full travel speeds, high torque, and continuous duty.

Designed for very precise positioning of dampers, vanes, and quarter-turn valves, the 11280A performs especially well in extremely demanding environments requiring continuous duty, high reliability, and low maintenance. Typical applications include induced and forced draft fan dampers, burner tilts, and fluid couplings.

Major Features and Benefits

Responsive, Positive Electric Control:

Electric actuators provide instantaneous response to a demand signal, eliminating system non-linearity due to dead time. Additionally, because the actuator is electric, the costs associated with providing and maintaining a clean, dry air supply are eliminated.

Non-Contact Position Sensing (NCS):

Non-contact position sensing eliminates maintenance problems and nuisance shutdowns that are common with slidewire or potentiometer position sensing. Once calibrated, the truly non-contacting sensor requires no maintenance.

True Position Indication:

Directly connected to the actuator output shaft, the non-contact sensor measures actual shaft position. This eliminates the hysteresis inherent with other means of position indication, giving tighter process control and allowing faster tuning.



Slidewire Emulation Circuit (SEC):

A truly unique feature, slidewire emulation provides backward compatibility of three-wire position proportional control schemes while eliminating control and maintenance problems associated with slidewire wear. The SEC provides the function of a slidewire but uses non-contact position sensing to determine shaft position.

Accurate Positioning:

Precise positioning of the actuator is achieved through state-of-the-art variable-speed motor control and positioning electronics that eliminate overshoot and hunting. Positioning accuracy of 0.2% span or better is achievable for extremely tight process control.

Fast Response Speed:

Instantaneous full-torque characteristics of the motor provide travel speeds as fast as 10 seconds for control loops such as ID/FD fan dampers or other pressure control applications that require fast full stroke response.

Self-Locking/Releasing Gear Train:

The double-reduction worm gear combination is self-locking and self-releasing and maintains position on loss of power. It is designed to hold greater than two times the rated output torque in a back-driving condition. This design provides superior reliability without the maintenance associated with other self-locking and brake mechanisms.

Torque Limiting and Stall Annunciation:

The 11280 actuator limits output torque, avoiding damage to the final control element and actuator. Stall conditions can be annunciated.

Warranty:

The 11280A warranty is effective for 30 months from the date of shipment and 24 months from the date of installation.

Closing The Loop:

To complement the 11280A actuator, Honeywell provides a compatible line of temperature and process controllers. The S9000 and UDC line of controllers, the Micromax™ 2 loop and logic system, and the UMC 800 multi-loop controller tightly integrate with Honeywell actuators to provide precise and reliable control of your process.

Sales and Service:

The 11280A Industrial Actuator and hundreds of other Honeywell industrial devices can be purchased on line through the Honeywell Industrial Store on our Web site at <http://www.iac.honeywell.com>.

This product is backed by Honeywell's global sales and service team, including the toll-free Technical Assistance Center (TAC) for after-sale support. For more information on this or other Honeywell products and services, please contact your local Honeywell representative, visit our Web site, or call 1-800-343-0228.

Abbreviated Specifications

Physical

Enclosure	Precision machined ductile iron weatherproof with corrosion resistant paint
Operating Temperature	-30°C to +65°C (-20°F to +150°F)
Relative Humidity	Fully operable over the range of 0-99% R.H. non-condensing
Crank Arm	Adjustable radii (8" to 14") crank arm
Rotation	90°-100°. Factory set at 90°
Manual Handwheel	Provides a means of positioning the actuator in the event of a power failure or set-up.

Catalog #	Torque (lb-ft)	Output Shaft Size	Shaft Key Size	Output Shaft Length	Net Weight
11284A	425	1 1/2" (51 mm)	1/2" (13 mm)	5" (127 mm)	150 lbs. (56 kg)
11285A	840	2" (51 mm)	1/2" (13 mm)	5" (127 mm)	225 lbs. (84 kg)
11286A	1500	2" (51 mm)	1/2" (13 mm)	5" (127 mm)	300 lbs. (112 kg)
11288A	2500	2 1/2" (64 mm)	5/8" (16 mm)	6" (152 mm)	550 lbs. (205 kg)
11289A	4000	2 1/2" (64 mm)	5/8" (16 mm)	6" (152 mm)	600 lbs. (224 kg)
11287A	5500	2 1/2" (64 mm)	5/8" (16 mm)	6" (152 mm)	600 lbs. (224 kg)

Electrical

Power	115/220 VAC, single phase 50/60 Hz up to 1500 lb-ft 208/240/480/575 VAC, 3 phase, 60 Hz; 380 VAC, 3 phase, 50 Hz
Loss of Power	Stays in place
Local Auto/Manual switch	Optional - allows local and automatic operation of the actuator.
Limit Switches	Standard - two SPDT end of travel limits rated (10 A at 125 VAC, 5 A at 250 VAC).
Auxiliary Switches	Two additional SPDT switches are standard (10 A at 125 VAC, 5 A at 250 VAC)
Direction of Rotation	Field-selectable via switch and jumper. Clockwise rotation - looking into the output shaft.

Actuator with Positioner

Input Range (CAT/PAT board)	Input: 4-20 mA, 1-5 VDC, 3-wire position proportional, ON/OFF
Fail-safe operation	If input falls below 2% of span, there are four choices selected by a movable jumper: stop, go full upscale, go full downscale, or go to a selected (adjustable) position.
Sensitivity	0.20% to 5% of span adjustable. Shipped at 0.5% of span
Hysteresis	Less than 0.4% of full scale
Linearity	± 0.25% of span
Repeatability	0.20% of span

4-20 mA Output and Slidewire Emulation

Feedback Signals	0/4 - 20 mA 0/1 - 5 VDC with 250 ohm resistor (0 - 16 VDC with 800 ohm resistor)
Slidewire Emulation	Provides output voltage proportional to shaft position and to supply voltage (1-20 VDC) without a slidewire. Emulates 100 to 1000 ohm slidewire.

Certifications

NEMA 4 enclosure	Standard
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Honeywell

Sensing and Control

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