

A large-scale industrial facility, likely an oil or gas refinery, is shown at night. The scene is illuminated by numerous bright lights, creating a high-contrast environment. In the foreground, a complex network of large, silver-colored pipes and metal structures is visible. To the right, a tall, slender distillation column stands prominently. In the background, several tall, lattice-structured towers are visible against the dark sky. The overall atmosphere is one of industrial activity and complexity.

Valve Actuation in a Compact and Innovative Package

Bettis™ SCE300
Intelligent and reliable quarter-turn electric actuator



SCE300: Smart, Compact, Electric



The SCE300 is an intelligent quarter-turn electric actuator from the Bettis family of actuators. Compact and lightweight, this all-in-one actuator fits the features of larger, heavier actuators into a neat, innovative design. Deploy the SCE300 to maintain effective control of low-torque, quarter-turn valves and dampers even in large and complex plants.

BETTIS™

To strive for and maintain maximum levels of process efficiency, your valves always need to function as intended. Emerson provides its customers with highly reliable and innovative actuator technologies to drive their valves, with the new Bettis SCE300 electric actuator punching above its weight given its compact size and attractive cost of ownership.





A new, RELIABLE actuator for your valve applications.

The new SCE300 puts reliability at the forefront of its purpose.

Reliability ► p3

Practical, compact, and FLEXIBLE.

The no-nonsense SCE300 is designed to fit right into your valve automation application.

Flexibility ► p5

CONTROL your valves with precision and intelligence.

The SCE300 allows you to customize the level of control required for your valve automation application.

Control ► p7

Maximize EFFICIENCY by minimizing user complexity and operating cost.

The all-round simplicity of the SCE300 equates strongly to efficiency in your plant.

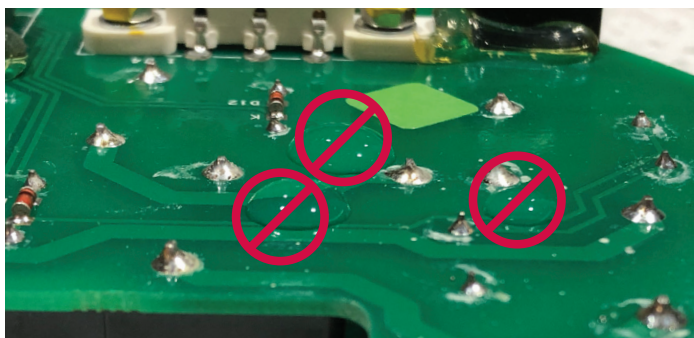
Efficiency ► p9



A new, **RELIABLE** actuator for your valve applications.

Regardless of duty cycle, your valve actuators absolutely must function when called upon. Drawing upon years of actuator design experience and customer feedback, Emerson designed a better actuator with reliability in mind. Resistant to the decaying nature of external environments and mechanically durable within, you can rely on the Bettis SCE300 to meet your valve actuation demands.

Resistant to the elements



Condensation protection is provided by a 10W heater within the unit, activated automatically when the control enclosure temperature drops below 10°C (50°F).



Over-temperature protection is provided by a sensor located within the control enclosure, as to limit the temperature of the motor and control system.



Electrostatic powder coating provides protection from the elements and is rated to 1,000 hrs minimum against salt spray and 100% humidity.



Innovative motor is duty-rated at 100% for on/off applications. The motor is also capable of supporting S4-50%, 1,200 st/hr modulating duty.

Mechanical durability in a compact package



Lightweight yet robust outer body, composed of die-cast anodized aluminum.



Robust materials are selected for loaded parts; for example, sintered alloy epicyclical gearing and cast-iron output drives.



Smooth gearing is achieved with an all-metal, internally-located, greased, and self-locking epicyclical gearing system, which helps eliminate the need for motor brakes.



Practical, compact and FLEXIBLE.

Actuators must slot seamlessly into seemingly endless configurations of plants and applications. The Bettis SCE300 provides flexibility not only during installation and commission but also when you need to interact with the valve – keeping said interaction as brief and simple as possible.

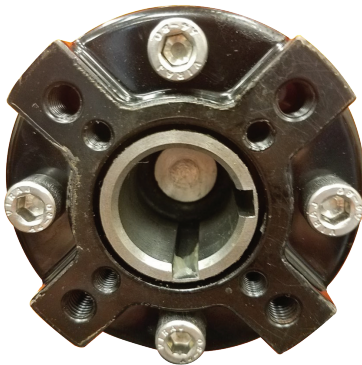
Adaptable to any quarter-turn valve in any plant



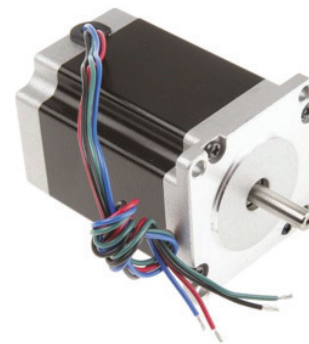
Simple installation onto small valves without stressing the pipework.



Six-model size range offers operating nominal torque from 63 Nm (46 ft lbs) to 2,000 Nm (1,475 ft lbs).

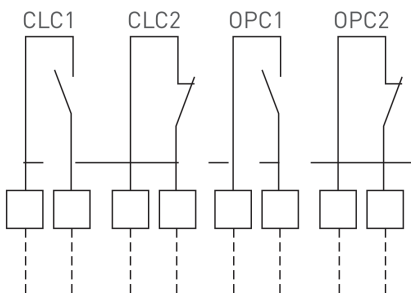


Flexible valve connection is possible via a dual-drilled interchangeable base plate, making the actuator readily adaptable to most types of quarter-turn valves.



Adaptable motor automatically provides compatibility with a wide range of voltages in DC or AC. The motor is field-configurable to run at three distinct speeds (e.g. 15, 28, and 48 seconds open-to-close for the four smallest sizes of SCE300).

Flexibility in setup or intervention when the need arises



Four latched-type output contacts are available for remote indication of fully open or closed status. Output contacts for monitoring and blinker/local selector indication are also available.



Non-intrusive design keeps the terminal enclosure separate from the electronics and motor compartment. Only the wiring terminal is exposed during field installation.



Manual override is always engaged, featuring a handwheel that does not rotate while the motor is in operation. This feature can be used when power to the actuator is lost.



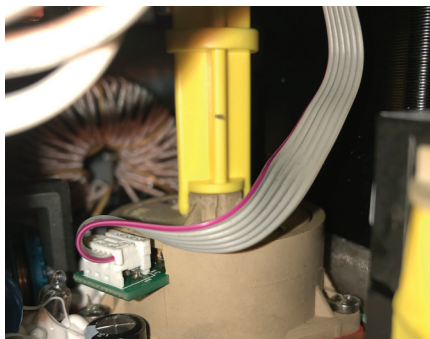
CONTROL your valves with precision and intelligence.

Modern valve actuators must do more than just fully open and close valves; at a minimum, you need to keep speed, torque, and position on a tight rein. The Bettis SCE300 does all of this, and more. Avail yourself of the actuator's optional Bluetooth™ connectivity to unlock even more intelligence to assist with actuator performance and maintenance.

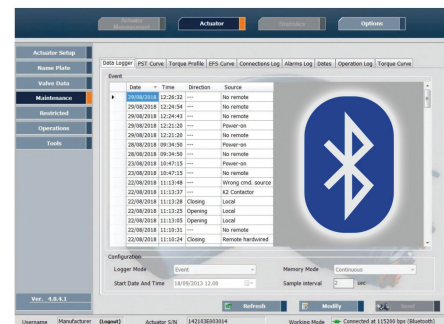
User-friendly control, whether hands-on or not



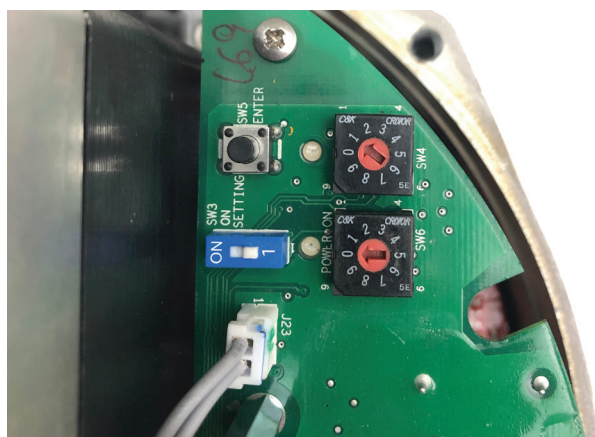
Mechanical travel stops at the base of the enclosure prevent over-travel during operation with the handwheel or motor, providing $\pm 10^\circ$ of over/under travel in each direction (resulting in 70° minimum and 110° maximum angular stroke).



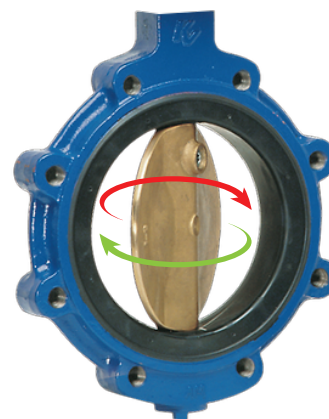
Absolute position sensor covers 110° of rotation, with travel endpoints set by the rotary switch (standard) or set non-intrusively (via optional Bluetooth).



Maintenance data for improved maintenance scheduling (valve position, actuator speed, output torque, faults, and status) is directly accessible via optional Bluetooth connectivity.

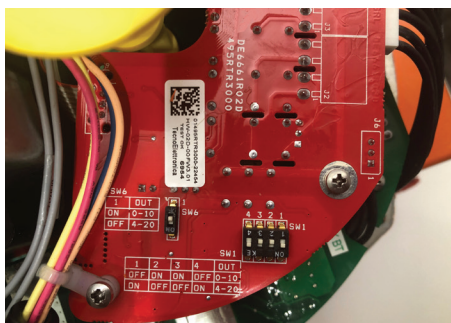


Precise torque control is configurable via user-friendly rotary switches located inside the control enclosure; bi-directional torque values of 50%, 75%, and 100% of nominal torque may be selected.



Integral speed control is independently adjustable in opening and closing directions.

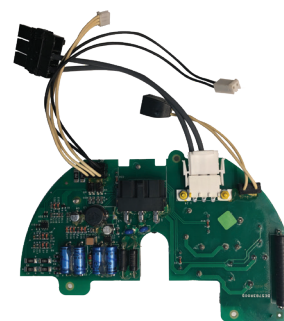
Optional modules add even more functionality



OM1: input/output module offers analog positioning control and position feedback, 4 additional SPST output contacts (configurable) independently settable at 10 points along the stroke, optional Bluetooth interface, information about loss of input signal and Bluetooth failure, and a local selector position alarm (with OM3 installed).



OM3: local interface module offers local/remote selection, open/closed push-buttons, and two LEDs for local indication (note: OM3 is available in weather-proof version only).



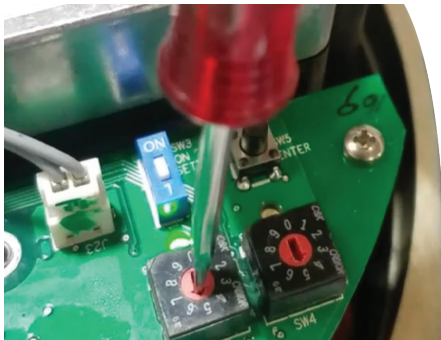
OM13: 3-wire connection module allows 120/240 VAC single-phase, 3-wire control for open/closed operations without an additional power supply.



Maximize EFFICIENCY by minimizing user complexity and operating cost.

You always strive to maximize your valves' operational efficiency, and you know that minimizing cost and downtime is the name of the game. The Bettis SCE300 achieves these goals via its simple operation and low installation, operating, and maintenance costs.

Simple to use and configure



Easy configuration via two rotary switches on the logic board to configure each function, which includes position, torque, open/close speed, reverse mode (clockwise/counter-clockwise) and output contacts.



Clear position indicators located on top of the actuator, for top-down, accurate visual reference of valve position. An optional “beacon”-type indicator can be viewed horizontally.



Local or remote control of the actuator's functions and parameters.



Simple connection to a bus system is possible with the optional OM9 (PROFIBUS DPV0/V1) and OM11 (DeviceNet) communication cards and setting all parameters via configuration software on a Bluetooth-enabled PC or PDA. Bluetooth is included as standard with the OM9 and OM11 cards.

Minimize cost before, during, and after installation



Low installation costs given that a single cable size is used across all actuator sizes.



Cost-effective actuator via design compactness and simplicity, which also makes the base actuator highly stockable.



Low power consumption of the actuator's motor minimizes running costs.



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