

SMARTLINK® Intelligent Valve Actuator Assembly



- **SMARTLINK™ actuator fitted to various bodies for all combustion flow control needs -**
butterfly, ball, linkage arm
- **Fully adjustable, 19 position, electronic gradient feature; accurate to 0.1 degrees**
– *Easy customization of the valve flow characteristic for high precision flow control and repeatability*
- **Direct coupled, factory calibrated valve and actuator assembly for precision flow control**
– *Provides precise and repeatable flow control required in modern processes to maximize efficiency and minimize emissions*
– *Reduces failures and inaccuracies associated with field-configured, linkage-type mounting arrangements*
- **Rugged industrial design includes continuous duty NEMA 4X valve actuators with integrated position feedback and heavy duty planetary gearheads**
– *For reliable, long-life operation*
- **No lubrication required;** reduces maintenance
- **Hazardous Location approved: Non-Incendive for Class 1, Division II; CSA, UL, FM, CE**

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The Maxon SMARTLINK® Intelligent Valve Actuator Assembly is a rugged, turnkey solution for industrial flow control applications that require a high degree of precision, repeatability, and commissioning flexibility in a small space.

In addition, SMARTLINK® provides easy, on-site customization of the valve flow characteristics. This feature makes it an ideal solution for parallel valve positioning systems in combustion control applications.

The SMARTLINK® assembly includes two components: 1) a Valve Actuator direct-coupled to a valve and, 2) a Control Interface unit between the Valve Actuator and the user's process controller, PLC, or DCS.

The **Valve Actuator** is an industrial rated, factory-calibrated assembly that incorporates a heavy-duty, planetary gear-head with integrated, long-life position feedback. It also includes a stepper motor for continuous duty, high precision valve control. The Valve Actuator is powered by 24VDC through a four wire cable that also includes a digital position communications interface to ensure reliable operation in electrically noisy environments.

The **Control Interface** is a DIN rail-mounted electronic device that "links" the user's process controller to the Valve Actuator. Several front panel-mounted switches and lights are provided for displaying alarms, simple valve configuration, and valve characterization. The Control Interface also provides a precision, 4-20mA position feedback signal, several relay driver outputs for indication of alarm and control status, and digital inputs for commanding the valve to its maximum and minimum positions. The unit is typically mounted in a control panel along with a Maxon or user-supplied 24VDC supply and output interface relays.

The SMARTLINK® Intelligent Valve Actuator Assembly specifications are as follows:



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| Position Accuracy | 0.1 degrees (measured on the valve actuator shaft) |
| Position Command | 4-20mA isolated input; 4.8V burden @ 20mA |
| Position Feedback | 4-20mA isolated output; 400 ohm max load |
| Power Input | 24VDC +/-5%, 25W (maximum) |
| Duty Cycle | Continuous |
| Relay Driver Outputs | Open collector, 30 VDC & 100mA max |
| Digital Inputs | 5-24 VDC @ 10mA (max) |
| Ambient Temperature | -40°F to 158°F (-40°C to 70°C) |
| Enclosure Ratings | NEMA 1, IP20 (Control Interface and all DIN rail options) NEMA 4X, IP66 (All standard, Maxon enclosures with factory-wired Control Interface and rail-mounted options) NEMA 4X, IP66 (Valve Actuator) |
| Output Relays (optional) | Output contacts: 250 VAC/DC @ 6 Amps DIN rail-mounted |
| Input Relays (optional) | Input coil voltage: 120VAC (230VAC and 24VDC options available) DIN rail-mounted |
| Universal Power Supply (optional) | Power Input: 115-230 VAC +/-10%, 50/60 Hz Power Output: 24VDC, 2.3 Amps (max) |
| Travel Time | 14 seconds (full open to close) |
| Approvals | Factory Mutual: Non-incendive for Class I Division 2, Groups A,B,C & D Hazardous (Classified) Indoor and Outdoor (Type 4X for Valve Actuator Only) Locations UL (US & Canadian): All actuator-related requirements in UL353 (Limit Controls) CE Gas Appliance Directive: All actuator-related requirements in prEN12067-2 and EN298 CE EMC Directive: Electromagnetic Immunity and Emissions (EN61000) CE Low Voltage Directive: Electrical Safety (EN61010-1) |

Butterfly Valve Options

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|------------------------|---|
| Cast Iron | 1", 1.25", 1.5", 2", 2.5", 3", 4", 6", 8", 10", 12", 14", 16" |
| Carbon Steel | 1", 1.25", 1.5", 2", 2.5", 3", 4" |
| Brass | 1", 1.25", 1.5", 2", 2.5", 3" |
| Stainless Steel | 1", 1.25", 1.5", 2", 2.5", 3", 4" |

Ball Valve Options

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|------------------------|--------------------------------|
| Carbon Steel | .5", .75", 1", 1.25", 1.5", 2" |
| Stainless Steel | .5", .75", 1", 1.25", 1.5", 2" |