

MAXON SMARTLINK® DS Intelligent Control Actuator Series




From the brand known for precision
and performance.

One product.

More markets and applications.

Honeywell



Introducing the most versatile actuator in the industry.

The MAXON SMARTLINK® DS Intelligent Control Actuator Series is a heavy-duty quarter-turn actuator that offers unmatched flexibility for the broadest range of commercial and industrial process control applications. With thousands of possible configurations, the MAXON SMARTLINK® DS helps you serve more customers in more markets – all from the brand you trust for unparalleled accuracy and repeatability.

MAXON SMARTLINK® DS

Intuitive interface

Industry-standard 4-20mA and Modbus communications capabilities, optional on-board display and plain-language menus make commissioning and troubleshooting simple.

Proven precision

Field-tested reputation for delivering accuracy within 0.1° over a full 100° of rotation, optimizing system performance and reducing energy usage.

Superior durability

Rated for hazardous and harsh environments to ensure maximum consistency and uptime in a wide variety of climates and installations.

Highly configurable

Made-to-order for unique flow control needs, with standard features and options that make the MAXON SMARTLINK® DS ideal for a wide variety of applications – delivered with a short lead-time.

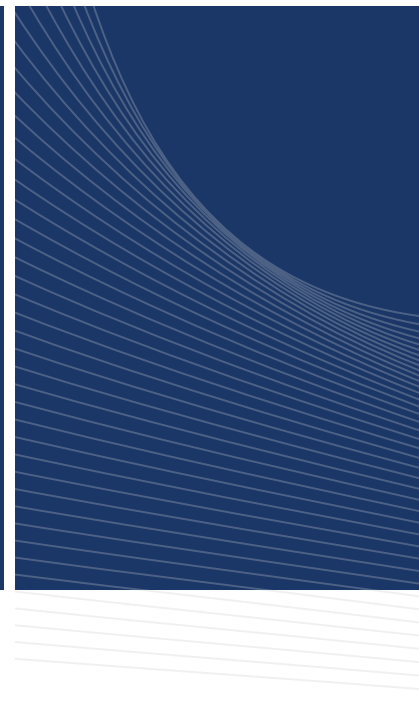


Flexible features

Serve more commercial and industrial customers with one series.

- **HIGH OR LOW TORQUE** – available in 300 in-lb (33Nm) or 900 in-lb (101Nm) and can rotate in a clockwise or counter-clockwise direction
- **HAZARDOUS LOCATION OR GENERAL PURPOSE APPROVALS** – MAXON SMARTLINK® DS can be ordered with or without a Class I Division 2 (CI-D2) hazardous location rating based on your application needs
- **AC OR DC POWER INPUTS** – choice of 110-240 AC or 24 VDC power, accessible via an easy-access compartment using standard wiring harness plugs
- **OPTIONAL BRAKE** – electronic brake limits shaft movement in the event of power loss or if the rated torque capability is exceeded, preventing system disruption and damage
- **OPTIONAL BACKLIT LCD DISPLAY** – on-board UV- and water-resistant display enables easy on-site commissioning and system monitoring
- **OPERATES IN ANY POSITION** – compact design allows actuator to be oriented in any plane
- **EXTENSIVE COUPLING OPTIONS** – can be integrated and shipped with a full line of butterfly and ball valves in a wide range of body and trim options (including iron, carbon steel, stainless steel and brass, and internal trim sets compatible with oxygen, natural gas, propane gas, digester gas, butane gas, coke oven gas, manufactured gas and landfill gas)

	300 in.-lb.	300 in.-lb.	900 in.-lb.	900 in.-lb.
	AC	DC	AC	DC
BUTTERFLY VALVE OPTIONS				
Cast Iron (ANSI Flange)	1", 1.25", 1.5", 2", 2.5", 3", 4"		—	
Carbon Steel (ANSI Flange)	1", 1.25", 1.5", 2", 2.5", 3", 4"		—	
Brass (ANSI Flange)	1", 1.25", 1.5", 2", 2.5", 3", 4"		—	
Stainless Steel (ANSI Flange)	1", 1.25", 1.5", 2", 2.5", 3", 4"		—	
Cast Iron (M Flange)	6", 8", 10", 12", 14", 16"		6", 8", 10", 12", 14", 16", 18"	
BALL VALVE OPTIONS				
Carbon Steel	0.5", 0.75", 1", 1.25", 1.5", 2"		1", 1.25", 1.5", 2"	
Stainless Steel	0.5", 0.75", 1", 1.25", 1.5", 2"		1", 1.25", 1.5", 2"	
Flow Capacity	1/32"-1/4" slot, 30°-90° V-port, round port			
Body Connections	ANSI flanged 150#, ANSI threaded			





MAXON SMARTLINK® DS

is well-suited for the following markets:

OIL AND GAS

**CONTROL SYSTEMS
MANUFACTURING**

AGRICULTURE

**CHEMICALS/
PHARMACEUTICALS**

PULP AND PAPER

AUTOMOTIVE

METALS AND MINING

FOOD AND BEVERAGE

UTILITIES



Industry-leading precision and repeatability

Achieve optimal efficiency and reduced energy usage.

- **SUPERIOR POSITIONING ACCURACY** – 0.1° with a full travel span of 100° or a maximum of 1,000 position points over the full range of operation
- **PERMANENTLY LUBRICATED PLANETARY GEARS** – precision-machined from hardened alloy steels to minimize slip and hysteresis while requiring no maintenance
- **OVERHUNG SHAFT LOAD** – internal shaft can bear up to 750 lbs of side load torque, effectively driving linkage mechanisms without compromising precise positioning

Reduce energy usage, increase cost savings

When the MAXON SMARTLINK® DS is used for air-fuel ratio control, it can help **reduce energy usage from 3-20%*** — which can add up to big savings.

* Results will vary based on your company's baseline performance.



Unparalleled durability

Get maximum consistency and system uptime.

- **ENCLOSURE RATINGS FOR FULL PROTECTION** – NEMA 4, NEMA 4X and IP67 ratings make the MAXON SMARTLINK® DS ideal for both indoor and outdoor installations, offering protection from hose-directed water, airborne dust contaminants, rain, ice, and moisture buildup
- **ALUMINUM HOUSING WITH POLYESTER POWDER-COATED FINISH** – offers superior impact, vibration and chemical resistance
- **WIDER RANGE OF TEMPERATURE TOLERANCES** – rated for -40° to +158°F (-40° to +70°C)**, enabling units to operate reliably in a variety of applications and regions
** Display temperature rating differs
- **LONG SERVICE LIFE MEANS LOWER COST OF OWNERSHIP** – 10 million repositions over a 10° span and 100 million repositions over the full 100° span

Enhanced communications interface

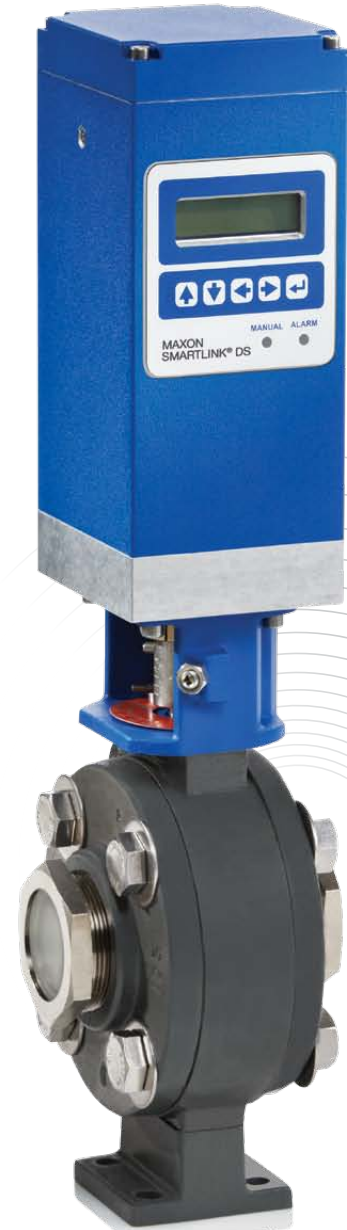
Integrate and commission more easily.

- **STANDARD COMMUNICATIONS PROTOCOLS** – direct-wired 4-20mA and Modbus communications make it easy to integrate with programmable logic controllers (PLCs) and larger process systems; option to input position to actuator via 4-20mA and output via Modbus for return position confirmation and health monitoring
- **ON-BOARD DISPLAY** – two-line backlit display and input buttons enable fast, on-site commissioning right at the actuator
- **DUAL CONDUIT CONNECTIONS** – enables full wiring access for both high and low power and logic via two industry-standard national pipe thread (NPT) connections to eliminate line interference

Extensive built-in diagnostics

Prevent costly downtime and improve process efficiency.

- **EASILY ACCESSIBLE REAL-TIME AND HISTORICAL DATA** – via Modbus to view information on the display, via the PC-based software, or via the DCS connection to aid in preventive maintenance and enable more accurate decision making
 - Alarm and lockout data
 - Internal temperature
 - Motor current and voltage
 - Position feedback
 - Number of shaft repositions
 - Total degrees of shaft movement
 - RS-485 Modbus performance
- **MODBUS DIAGNOSTIC COUNTERS** – help troubleshoot and verify Modbus communications commands
- **CONTINUOUS HEALTH MONITORING** – alarm and lockout detection algorithms run every 50 milliseconds to ensure the system is performing optimally while tracking and maintaining a log of the data



**Commercial & Industrial
Combustion (C&I)**

Honeywell

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SMARTLINK® DS

Technical Specifications

	300 in.-lb.	300 in.-lb.	900 in.-lb.	900 in.-lb.
	AC	DC	AC	DC
Actuator Standard Size	6" x 4.4" x 9.5"	4" x 4.4" x 9.5"	6" x 4.4" x 11.5"	4" x 4.4" x 11.5"
Torque Rating (in N.m)	33 N.m		101 N.m	
Torque Rating (in ft.-lb.)	25 ft.-lb.		75 ft.-lb.	
Power Train Stepper Motor	Continuous duty, permanently lubricated planetary gear set			
Weight	15 lbs.	14.5 lbs.	16 lbs.	15.5 lbs.
Full Travel	With no valve option, maximum full travel span: 100 degrees			
Resolution	0.1 degrees resolution or a maximum of 1,000 position points over the full range of operation (with no valve option)			
FEATURE OPTIONS				
Actuator Size With Brake Option	6" x 4.4" x 11.5"	4" x 4.4" x 11.5"	6" x 4.4" x 11.5"	4" x 4.4" x 11.5"
Brake Functionality	Brake is applied (de-energized) within 10 milliseconds of either event: 1) Loss of AC or DC input power is sensed 2) Rated torque is exceeded and motor loss-of-synchronization is sensed			
Display Option - 2 x 16 Digit Backlit LCD	Actuator status, user commands, user settings, actuator history with full commissioning at the unit. 2 LEDs to indicate manual mode (not controlled by 4-20mA inputs), and when alarm or lock-out condition exists.			
Hazardous Location Ratings	Non-incendive for Class I, Division 2, Groups A, B, C and D, dust-protected for Class II, III, Division 2, Groups E, F and G hazardous (classified) locations			
Mounting Bracket Shaft Configuration Options	½" keyed output, linkage arm, 1/2" square output, 3/4" square output		17mm keyed output, 1/2" square output, 3/4" square output	
Configuration Options	Order as an actuator only: DS SA; actuator with valve mounting bracket: DS CA; actuator coupled with a butterfly valve: DS CV; actuator coupled with a ball valve: DS BV			
AGENCY APPROVALS				
Factory Mutual Global (File No. 3046182 & 3041711)	Non-incendive Class I, Division 2, Groups A, B, C and D; Dust-ignition proof Class II, III, Division 1 & 2, Groups E, F and G Hazardous Locations; NEMA 4X and IP67			
	CAN/CSA C22.2 No. 0-M91, No. 142-M1987, No. 213-M1987, No. 157-92, 1010.1, No. 94-M91, ANSI/IEC60529, ANSI / NEMA 250			
	ANSI / ISA 61010-1 Safety Requirements for Electrical Equipment			
	ATEX Certificate No. FM13ATEX0020: Equipment Group II, Category 3, Gas atmosphere Explosion Protected type "n", gas group IIC, Temperature class T4 and Equipment Group IIC, Category 3D, Dust atmosphere Explosion Protected type "t", group IIIC, Temperature class 135°C hazardous locations; EN60079-0:2012 + A 11: 2013, EN60079-15:2010, EN60079-31:2009, EN60529:2000			
	IECEx Certification Reference No. US/FMG/ExTR13.0011/0: Explosion Protected type "n", gas group IIC, Temperature class T4 and Dust Ignition Protected by enclosure type "t", equipment group IIIC, T=135°C hazardous locations. IEC60079-0:2011, IEC60079-15:2010, IEC60079-31:2008, EN60529:2013			
	Safety Feedback Relay Outputs: Performance Level: (PL) of "e" in a Category 4, as calculated per EN/ISO 13849-1			
Underwriters Laboratories, Inc. (File No. MH49631)	UL 353 - Standard for Safety for Limit Controls UL 1998 - Standard for Safety, Software in Programmable Components			
MAXON - Self Declaration	Compliance with European CE requirements defined by: - EMC Directive 2004/108/EC - Low Voltage Directive 2006/95/EC			

