MSUD SMART CONNECTOR



INNOVATIVE VALVE CONNECTOR WITH IO-LINK INTERFACE

The smart connector in design A, featuring an 18 mm contact arrangement, enables remote control and monitoring of connected valves through an IO-Link interface. Compliant with the IO-Link Class B specification, the connector delivers sufficient power to operate larger solenoid valves with currents of up to 2 A. When paired with an IO-Link master, it allows for the retrieval of diagnostic data related to the connector, solenoid coil, and valve system. Additionally, the pre-assembled, overmolded design ensures sealing in accordance with protection class IP65/67 standards.

YOUR ADVANTAGES:

- Comprehensive diagnostic options
- Early failure detection
- M12 connection enables plug-and-play functionality
- Energy-saving through configurable pulse width modulation
- Two operating modes: IO-Link mode or standard mode
- Safety-oriented galvanic isolation of the Class B port

Simple installation

The standardized valve connector in combination with the M12 connector enables easy installation (plug-and-play solution) during commissioning and maintenance.

Service friendly

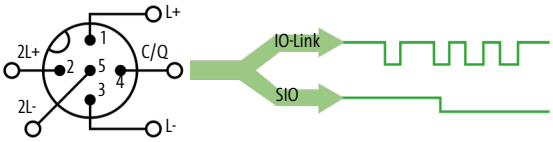
The configured parameters of the connector can be saved in the data memory of the IO-Link master and can be transferred to a replacement product in the event of a replacement, saving time and money. In addition, an IO-Link device update is possible using BLOB transfer.

Energy-saving

The smart connector offers efficient energy savings thanks to its configurable PWM mode, which automatically adjusts the output current and thus reduces the power consumption of the solenoid coil. The duty cycle can be flexibly adjusted from 11 % to 100 %, allowing energy consumption to be precisely tailored to the requirements of the application. The switch-on time can be flexibly adjusted up to 2,000 milliseconds, ensuring optimal tightening of the valve armature before the energy-saving PWM mode is activated. This mode also works independently of an IO-Link connection.

Two operating modes

1. IO-Link mode: Control and operation are carried out via the IO-Link master.
2. Standard mode: The valve connector works in two-wire operation and uses preset PWM and timer functions for switching on and off.



Diagnostics and monitoring

The connector's IO-Link connection allows continuous monitoring and diagnostics of key status variables, including supply voltage, output current, load resistance, solenoid power consumption, temperature, and valve power-on time. A multicolor RGB LED displays various output states, while the “Find Me” mode simplifies locating the connector during a failure.

Maintenance-efficient

The smart connector features two built-in counters for alerting and preventive maintenance. One counter tracks the total switching cycles throughout the connector's lifecycle and cannot be reset, while the other is user- configurable. Additionally, users can set limits for various measured variables, triggering automatic alerts when these thresholds are reached to help prevent failures.

ORDER DATA



Description		Art.No.
M12 St. 0° A-cod. / valve pl. A-18 mm IO Link B	PUR 5 x 0.34 bk UL/CSA + drag chain 0.2 m	7036-41491-7320020
Technical data		
Series	Design A according to DIN EN 175301-803	
Connection	M12 connector (5-pole)	
Rated voltage	24 V DC (18–30 V DC)	
Output current	max. 2 A (dependent on the master)	
Personal consumption	< 10 mA	
Interface	IO-Link V1.1.4	
IO-Link device port type	Class B	
Cycle time	2.8 ms	
I/O process data	8/2 Bytes	