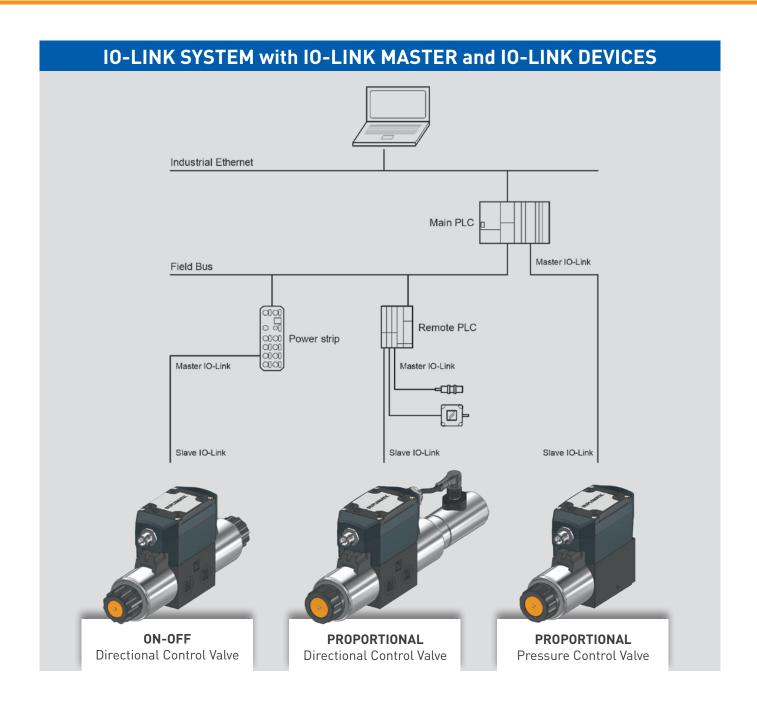


Over 40 years' tradition in manufacturing safety and reliable closed-loop systems for Industrial Automation



IO-LINK AND HYDRAULICS: ON-OF



THE PERFECT SOLUTION for INDUSTRY 4.0 and INTERNET of THINGS

IO-LINK solutions enable to integrate either **ON-OFF** or **PROPORTIONAL** hydraulic valves into digital communication systems, with reduced engineering effort and minimum hardware requirements.

Standard cables and M12 connectors, already in use for actuators and sensors, enable simple and cost-efficient connection of hydraulic valves in the field.

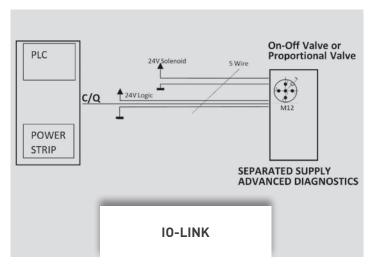
Data availability for predictive maintenance, as well as quick and easy device replacement are also advantages of IO-LINK solutions, which are particularly suitable for cost-competitive applications.

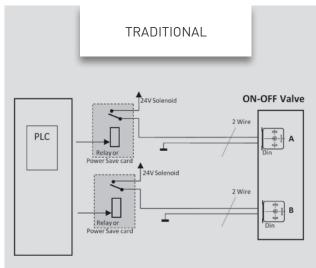
IO-LINK solutions foster OEM systems into Industry 4.0 and Internet of Things.

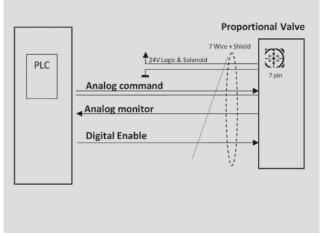
F AND PROPORTIONAL SOLUTIONS

EASY INTEGRATION and DIAGNOSTIC FUNCTION

- IO-LINK is not to be considered as a new communication fieldbus; it is an efficient complement, that can connect the PLC digital output directly to the hydraulic valve
- IO-LINK is a point to point connection between the main or the remote PLC or the IO power strip and any type of hydraulic valve
- The IO-LINK wire connection can be a simple unshielded cable
- IO-LINK allows the use of different supplies for logic and power
- IO-LINK is a full digital connection







The traditional solution requires different wiring for each type of valve. In the case of an ON-OFF valve, a power PLC output or a relay must be used. The traditional connection doesn't allow the exchange of diagnostic information with the PLC or the change of the valve's setup parameters.

IO-LINK solutions have the same connection for every type of valve; it replaces the traditional wiring of both ON-OFF valves and PROPORTIONAL valves with 7 or 12 pin connectors.

IO-LINK valves enable diagnostics and setting adjustments, as required by Industry 4.0.

10-LINK connection 5-pin M12 A (IEC 61076-2-101)



Pin	Values	Function
_ 2	2L+ 12 ÷ 3	0 V Supply of the power stage
- 5	2L- 0V (G	ND) internal galvanic isolation from PIN 3
- 1	1L+ +24 V	IO-Link voltage supply
- 3	1L- 0V G	
4	C/Q	IO-Link Communication
	5 - 1	2 2L+ 12÷30 5 2L- 0V (GN - 1 1L+ +24V (GN - 3 1L- 0V GN

IO-LINK PRODUCT RANGE

A full set of diagnostic functions are available for the main PLC through the IO-LINK communication. These are some examples of Duplomatic's product range with IO-LINK connection:



DS3GL **ON-OFF Directional Control Valves**

- Direct operated, with digital integrated electronics and mounting interface in compliance with ISO 4401-03 standards
- IO-LINK communication
- Different options are available: soft-shifting, fastshifting, power-saving; as well as zinc-nickel coating that ensures a salt spray resistance up to 600 hours



DSE3JL **Proportional Directional Control Valves**

- Direct operated, with digital integrated electronics and LVDT position transducer. Mounting interface in compliance with ISO 4401-03 standards
- IO-LINK communication
- They control positioning and speed of hydraulic actuators
- Easy to install



PDE3GL **Proportional Pressure Control Valves**

- · Direct operated, with digital integrated electronics and mounting interface in compliance with ISO 4401 standards
- IO-LINK communication
- Suitable to pilot two-stage valves, for pressure control in hydraulic circuits
- Available in five pressure control ranges, up to 350 bar

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