

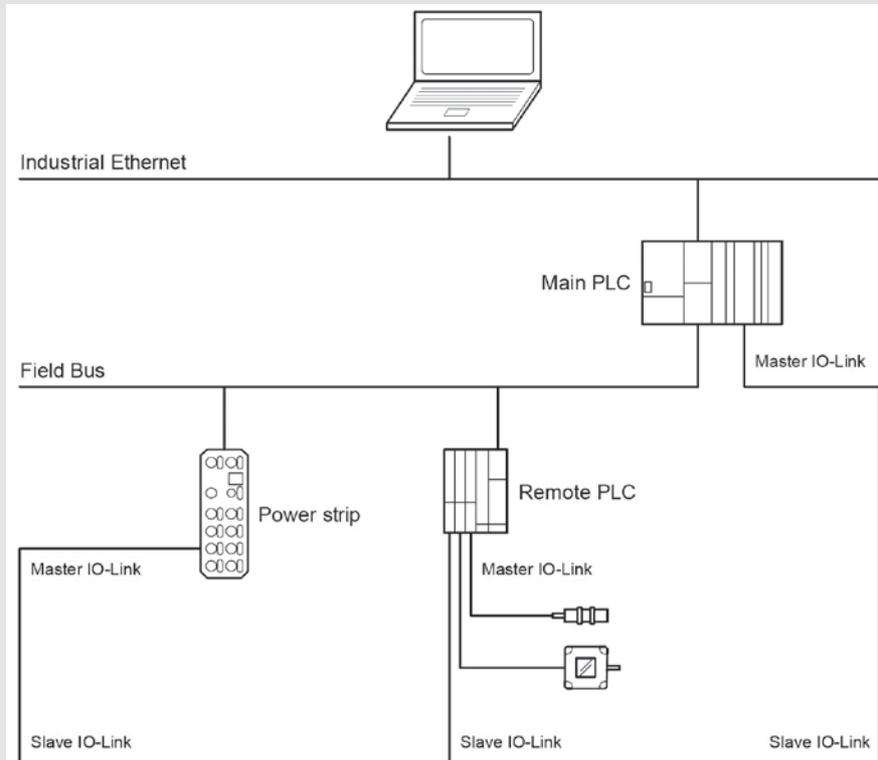
**Hydraulic
solenoid valves
with
IO-LINK**

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



IO-LINK AND HYDRAULICS: ON-O

IO-LINK SYSTEM with IO-LINK MASTER and IO-LINK DEVICES



ON-OFF
Directional Control Valve



PROPORTIONAL
Directional Control Valve



PROPORTIONAL
Pressure Control Valve

THE PERFECT SOLUTION for INDUSTRY 4.0 and INTERNET of THINGS

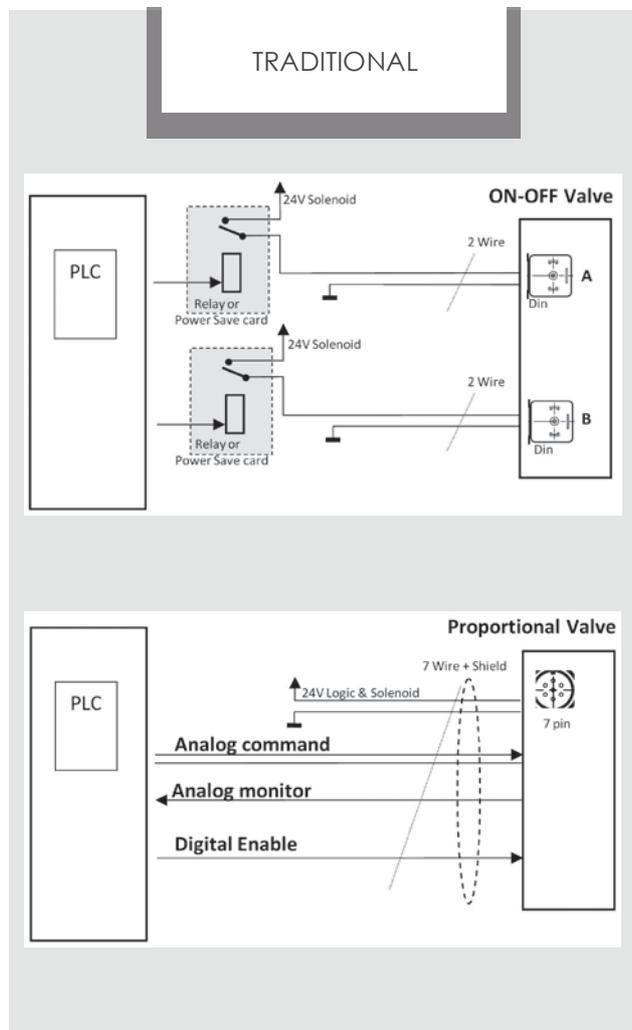
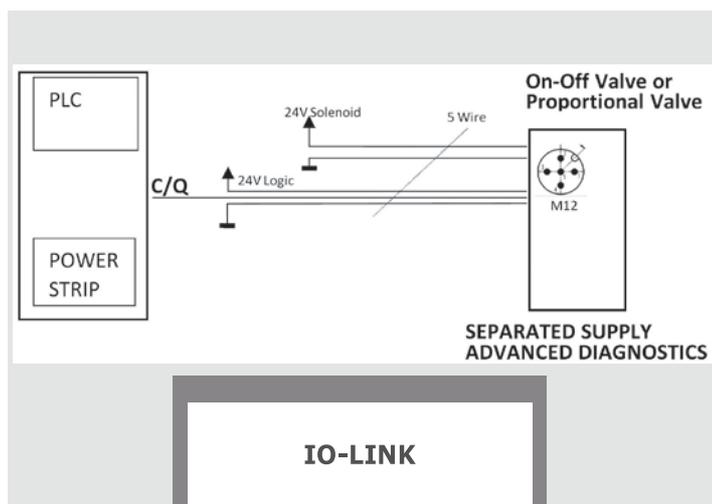
IO-LINK solutions enable to integrate either **ON-OFF** or **PROPORTIONAL** hydraulic valves into digital communication systems, with reduced engineering effort and minimum hardware requirements. Standard cables and M12 connectors, already in use for actuators and sensors, enable simple and cost-efficient 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.



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.

IO-LINK connection

5-pin M12 A
(IEC 61076-2-101)

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



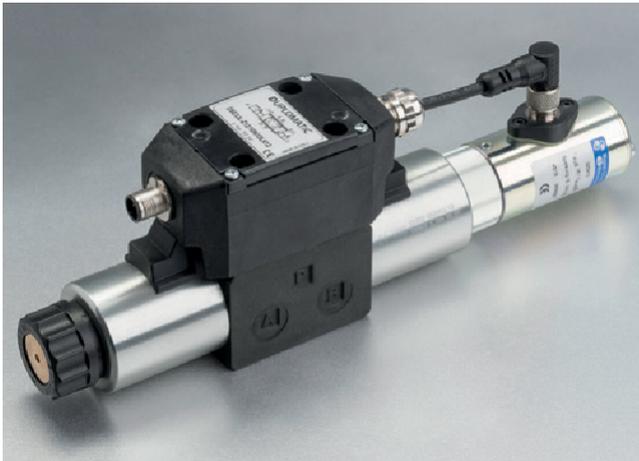
IO-LINK PRODUCT RANGE

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, fast-shifting, 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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