UHC-126 Universal hydraulic control

This universal hydraulic control module was designed for enhanced positioning and pressure control and is available with different fieldbuses like **EtherCAT** and **ProfiNet**. The position controller is completely redesigned to get best dynamic performance and highest positioning accuracy. Two analog inputs for two pressure sensors, one analog input for position control and one SSI interface fulfill all market requirements. Next to the standard position control, following options are implemented:

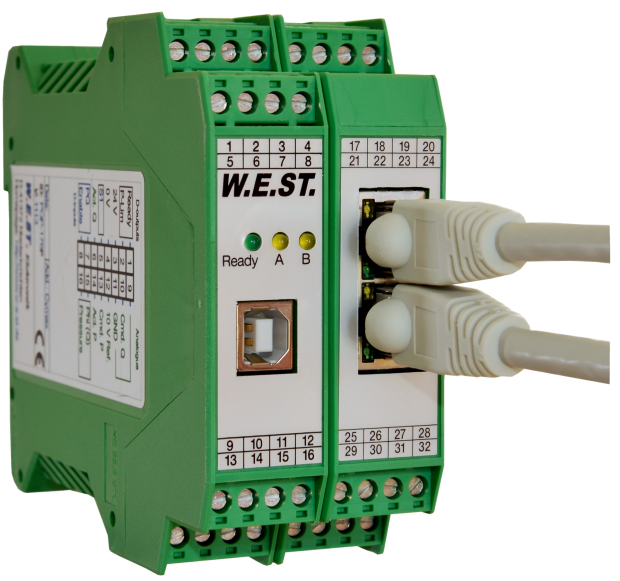
- drift compensation; for correct zero point adjustment
- fine positioning; to compensate position failure resulting by external forces
- stroke depended deceleration or NC control
- PT1 control; to optimize the dynamic behavior
- acceleration feedback by measuring the differential pressure usable in case of low dynamic drives
- **UHC-326-U-*** with commissioning assistant for simple and fast basis adjustment of the position control parameters

Additionally, a PQ pressure control function can be activated (with or without the position control). In PQ mode, typically both pressures are measured to build the differential pressure. Different function modes are usable for pressure limitation control and active pressure control with positive and negative command pressures.

Features:

- PID compensator
- DAC, dynamic activation control

The interface to the PLC is simple. Mainly an Ethernet (**EtherCAT** or **ProfiNet**) is used. All process data are sent in some µs and the parameterization of the complete module can be done by the fieldbus interface.



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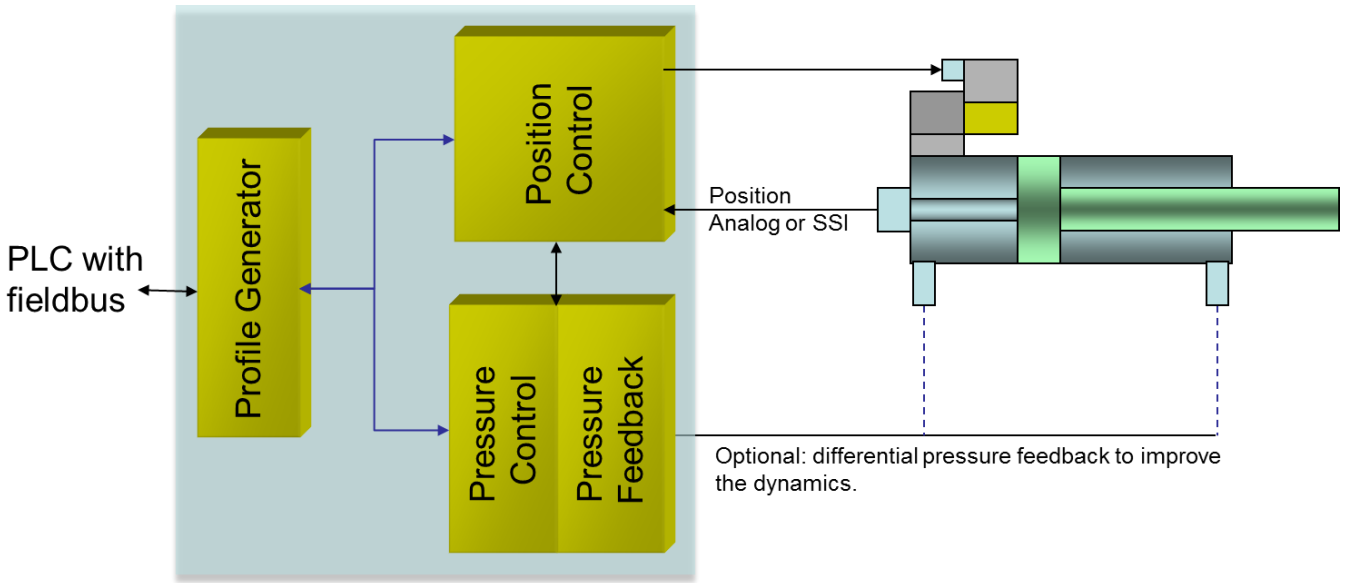

Example:

- proportional control valve with integrated electronics
- cylinder with position sensor and two pressure sensors
- UHC-126-U control module

The position resolution of 1 µm is used by the integrated sensors with SSI interface. The acceleration is calculated by the differential pressure (pressure feedback) and is used to improve the damping of the hydraulic system.

The pressure control function is able to limit the maximum force (pressure limitation control).

All information are sent and sent back over the fieldbus.

Typical applications:

- High accurate positioning control for all kinds of hydraulic applications
- Presses control (automatic high/low speed profiles) and pressure limitation control
- High speed positioning in SDD Mode
- Constant speed in NC mode
- Low dynamic drives with high mass and/or long pipes (critical to control) enhanced acceleration feedback (differential pressure measuring)

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