

Cla-Val e-Drive-34

Actuated hydraulic pilot

- Versatile:** Pressure, flow, level or position control
- Precise:** Pressure or flow modulation to a high degree of accuracy
- Flexible:** Remote set-point adjustment via a local controller and/or SCADA system
- Robust:** Ensure product longevity with IP68 protection and stainless steel construction
- Economical:** Low power consumption of only 12 Watt at 16 bar



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Actuated hydraulic pilot

DESCRIPTION

The **CLA-VAL e-Drive-34** is a flexible actuator allowing the control of pressure, flow, level, or valve position via a CLA-VAL hydraulic control pilot. The combination of a CLA-VAL hydraulic pilot and the **e-Drive-34** is designated as the PCM Series valves.

The actuator has been designed to withstand the most challenging operating conditions, and its motor has been tested for millions of cycles, ensuring reliability and durability. The **e-Drive-34** can be directly interfaced to the D22 electronic valve controller, or any SCADA system. With a 10 to 32 VDC voltage range and a power consumption of only 12 Watt at 16 bar, it can be autonomously powered by the CLA-VAL e-Power IP power generator.

FUNCTIONALITY

The **e-Drive-34** is designed to actuate various CLA-VAL pilots, whether the required regulation is for pressure, flow, level, or valve position.

The **e-Drive-34** actuated pilot adjusts the control pilot to the desired set-point, and is intended to handle up to 500 set-point modifications per day.

CLA-VAL actuated pilots communicate through a 4-20 mA signal or Modbus RTU 485 to adjust the valve set-point via any SCADA system and/or a D22 electronic valve controller, excluding the need for a computer in the field.

Pilot interfaces include:

- CRD-34 :** Downstream pressure control
Series D22 90-01 or PCM 90-01
- CRL-34 :** Upstream pressure control
Series D22 50-01 or PCM 50-01
- CPC-34 :** Valve positioning
Series D22 138-01 or CPC 138-01
- CDHS-34 :** Flow control
Series D22 40-01 or PCM 40-01

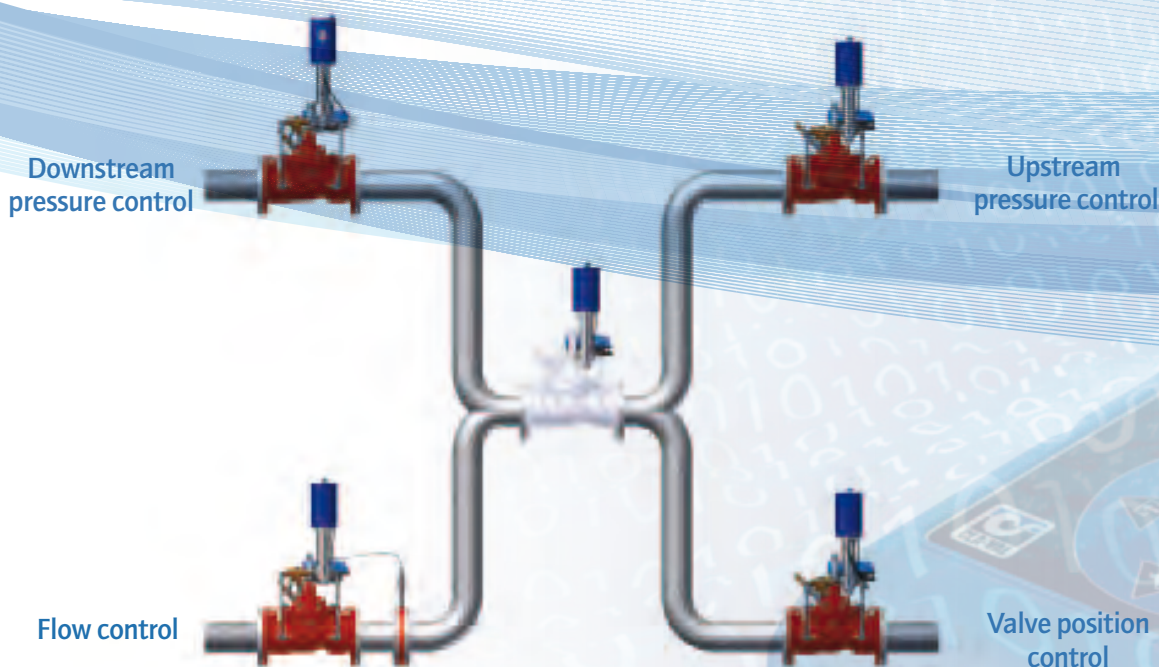
For optimal performance, the **e-Drive-34** is factory calibrated with maximum rotation speeds, security limiters, and signal loss defaults.

TYPICAL APPLICATIONS

The **e-Drive-34** is well suited for systems that require remote set-point management, with the added security of a hydraulic backup maintaining hydraulic control in the event of power failure (optional).

Having the same hydraulic regulation characteristics as a standard CLA-VAL regulating valve, the **e-Drive-34** series pilots will sense pressure variations directly on the diaphragm, which will absorb fast or unusual network reaction, such as overpressure.

In the event of a power cut, the hydraulic pilot maintains its last commanded set-point, ensuring the stability and integrity of the system through hydraulic control only.



SPECIFICATION

Power supply

- 10 VDC to 32 VDC
- 16 rpm nominal speed @ 24 VDC
- 8 rpm nominal speed @ 12 VDC
- 500 mA max. (actuating mode) @ 16 bar
- 800 mA max. (actuating mode) @ 21 bar
- 350 mA average nominal (unactuating mode)
- 30 mA stand-by (unactuating mode)

CLA-VAL recommended power supply is the e-Power-IP turbine for a completely autonomous system

Power supply protection

- Max. 32 VDC overvoltage
- Max. 1 A couple limitation
- Polarity inversion & short-circuit
- Automatic shut-down at 80°C internal

Electrical connection

- 1x 10 meter shielded cable (12-wire)
Wire section: 0.22 mm²
Cable diameter: 6.9 mm
- 1x 6-pin Souriau™ connector for Modbus communication
- 1x 3-pin Lumberg™ connector for computer connection/maintenance

Control inputs

- 4-20 mA (2 wires)
- 2x dry contacts (manual operation)
- Modbus RTU 485 Souriau 5-pin connector

4-20 mA input protection

- Max. 32 VDC over voltage - isolation (2 wires) (optocoupler isolation with CMR 1000 V, CMR: common mode rejection)

Position feedback

- 4-20 mA (load impedance $\leq 500 \Omega$)
- 2x programmable alarm positions 10-32 VDC / 10-240 VAC at max. 1 A

4-20 mA output protection

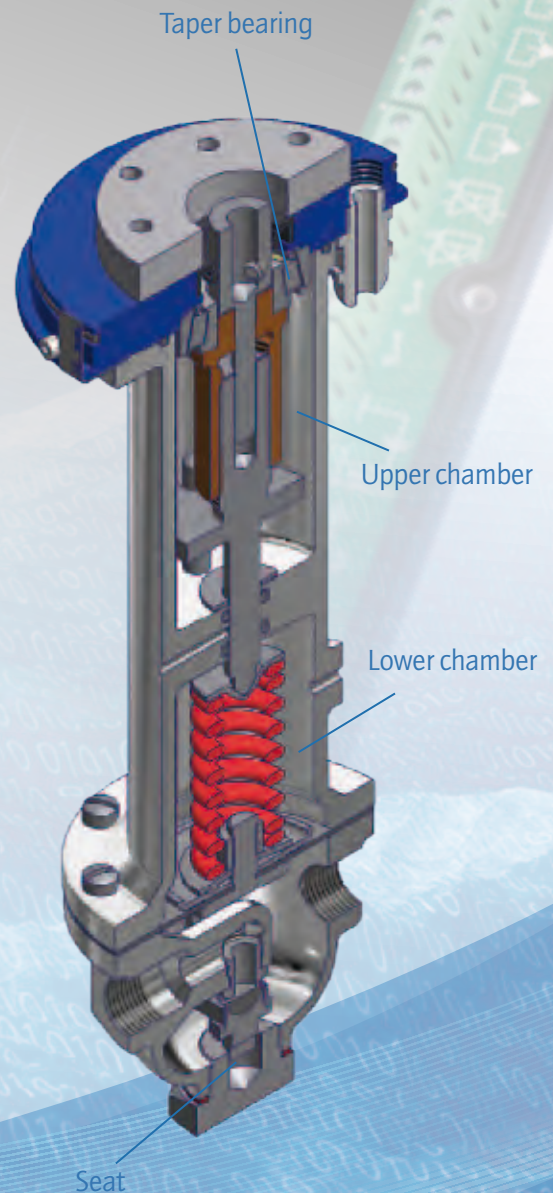
- Max. 32 VDC overvoltage (dry contacts input and 4-20 mA output at the same voltage, un-isolated to each other)

Operating diagnostic

- Through diagnostic LED as referenced in the user manual (Green / Red / Blinking)

Control signal loss

- Choice of: Hold last position, or return to 4mA or 20 mA



Pressure range

- 0 – 10 bar / 16 bar / 25 bar (dependent of the associated pilot)

Operating temperature

- - 10°C to + 80°C (electronics only)

Environmental Protection

- IP68, validated 1 month at 0.2 bar

Interface

- Plug & Play
- Modbus RTU 485
- Optionally CLA-VAL D22 Electronic Valve Controller
- Graphical software Interface compatible with Win 7 (32 & 64 bit)



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WATERWORKS

From the reservoir to the customer tap, the CLA-VAL Company has developed more than 3,500 Automatic Control Valve models.

Accurately controlling pressure, tank level and flows within water networks is the result of more than 80 years of unparalleled expertise.

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