

HCU Remote

The hydraulic control cabinet HCU Remote is used for remote and local control of valves fitted with hydraulic actuators. The valves can also be operated directly at the cabinet and also without electricity with the hand pump.

Description

At operational changes, or emergencies, it is necessary to quickly close the valves. Therefore there is a need to be able to remotely control valves from control centers. HCU Remote is meant for the most demanding locations where remote control is required. All components are located in a rugged metal enclosure and the electronics to electrical cabinet with high protection class.



Function

The HCU Remote contains an electrical hydraulic pump with frequency converter control. The pump is connected by hoses to the valve actuator. The control of the valve is based on the analog signal of the position transmitter. The hydraulic system is controlled with solenoid valves based on the valve position. The default closing time for each actuator size is calculated to give a slow closing to minimize the risk of water hammer in the pipe. The closing time and different operation ramps can be calibrated because of the frequency converter. For control of the hydraulic pump and the solenoid valves, programmable logic is used. The control system can be adapted to current circumstances and requirements.

Remote control

The HCU Remote is provided with equipment that enables remote control of the valves. To transmit the signals to and from the control center, common wired or wireless transmission methods can be used. Wireless transmitting is working in 3G/4G networks. The wired alternatives in standard control unit are Modbus TCP/IP and I/O SCADA. Other data transfer methods are also possible.

Equipment

The Hydrox product range provides a complete hydraulic control cabinet with the following components:

- Compact power pack with hydraulic pump, oil tank and pressure switch

- Electrically operated directional valves and indicators
- Electrical cabinet with power module and frequency converter as well as heater to keep the unit free from moisture
- Process screen on the door of the electrical cabinet

Local control

- Control with buttons: common open, close and stop buttons, valve selection is made on the process screen
- Diode indication for position 0-100 % open and end positions in the process screen
- Active and old alarms in the process screen
- Emergency stop and Local/Remote control switch
- Local control overrides remote control for safety

Remote control

- Incoming signals: open/close for each valve and common stop
- Analog feedback signals for valve position and digital feedback signals for end positions.
- Process and equipment alarm

Position indication at the actuator

- Hydrox actuator is equipped with position transmitter with analog signal and digital signals for end positions.
- Position transmitter and HCU remote cabinet are factory calibrated together with valve and actuator.
- No calibration is needed when installing the cabinet at site.

Technical characteristics:

Cabinet

- Dimensions: 1310 x 895 x 312 mm (W x H x D)
- Control unit protection classification: IP34
- Inner electrical cabinet protection classification: IP65
- Fluid viscosity: 10–500 mm²/s
- Filtration: ISO code 16/13; SAE class 4 or better
- Fluid temperature: -20 °C – +80 °C
- Ambient temperature: -25 °C – +35 °C (heating, optional cooling)

Pump

- Motor: 0,75 kW
- Connection voltage: 400v/3-phase, 50 Hz
- Pump flow rate: 0,1-1,26 l/min
- Maximum recommended pressure: 210 bar
- Pressure limiter at 150 bar (adjustable)

Oil tank

Reservoir capacity: 2 lt

Hydrox model	Runtime 0–100% (s)
Hydrox 035BP	23
Hydrox 2	65
Hydrox 4	150
Hydrox 8	271
Hydrox 16	504
Hydrox 32	579
Hydrox 64	608

Model	Flow rate	Product no.
HCU Remote	0,1-1,26 l/min	812100

Options	Product no.
Hydrox Control Unit (HCU) Remote - Locked control cabinet	812010
Hydrox Control Unit (HCU) Remote - Analogue pressure measurement	812011
Hydrox Control Unit (HCU) Remote - Wireless remote control	812012
Hydrox Control Unit (HCU) Remote - For six valves	812013
Hydrox Control Unit (HCU) Remote - For two valves	812014
Hydrox Control Unit (HCU) Remote - Cooling	812015

Control valve block

- Control valves: 2-6 pcs.
- Max. pressure: 210 bar
- Positions of lever: 3 (open - neutral - shut)

Pressure gauge

Range: 0...250 bar

Electrical cabinet

- Local and remote access switch, safety switch
- Control panel
- Common operating buttons: open, close, stop and emergency stop

Control panel

- Size: 7" Simatic
- Valve functional calibration window
- Valve position indication: Analog position 0-100 % open and end positions
- Alarms: Active and old ones
- Diagnostics and user settings

