

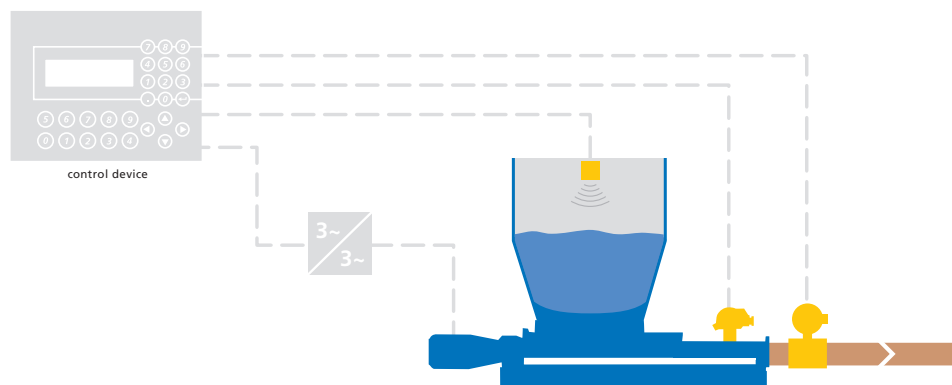
## Level control LVCL

The **seepex** level control can be used in differently structured control circuits. The product level is measured e.g. through ultrasound or load cell. The basis is a programmable logic compact

controller with an integrated display and control unit. The following functions are integrated in this compact control:

<b>Dry running protection</b>	for protecting the pumping elements rotor and stator against running dry.
<b>Overpressure protection</b>	with freely adjustable shut-off pressure.
<b>Boundary-layer injection</b>	The friction between the conveying liquid and the piping can be reduced by adding lubricants, which also considerably reduces the operating pressure of the pump. This results in reduced drive power and considerable cost saving.
<b>Process factor display</b>	Process factors such as plant pressure, pump speed or operating hours are shown on the display.
<b>Operating and fault messages</b>	Depending on the type of fault, either a warning is issued or the process is switched off. Faults are listed in clear text.
<b>Settable parameters</b>	Plant and control parameters such as drive data and limit values can be set. All the entries are password-protected.
<b>Connection to site systems</b>	Connection to a site control system is possible through various bus systems.
<b>Control analysis through data communication</b>	permits fault diagnosis through a GSM modem controlled from the <b>seepex</b> headquarters.

### Process of level control



## Characteristics of the LVCL level control

- ~ Simple operation through various display pages
- ~ Different operating languages can be set
- ~ Membrane keyboard for parameter entry and switching the control functions
- ~ Expansion through the CAN interface for adaptation to additional customer demands
- ~ Storage of the control parameters in the user ROM that is not affected by power loss
- ~ Additionally integrated resettable operating hours meter



Control device with various display pages permits simple and user-friendly operation

## Technical Data

<b>Structure:</b>	PLC with integrated LC-display	<b>Processor</b>	
<b>Supply:</b>	24V DC	<b>Command cycle time:</b>	approx. 0.8µs (with 70% bit and 30% analogue processing)
<b>Power consumption:</b>	max. 20W	<b>Memory structure:</b>	User RAM 300 kByte System PROM 448 kByte FlashPROM User PROM 1024 MByte FlashPROM
<b>Front:</b>	LC-display: 4x20 characters Multilingual display Membrane keyboard with 26 keys 10 keys with LEDs Protection class IP65 (front)	<b>Signals:</b>	8 digital inputs with 24 V DC rated voltage  4 analogue inputs for the voltage range of from -10V DC to +10V DC  2 analogue PT100 inputs for temperature measurement  8 digital outputs with 24V DC rated voltage, maximum load 500 mA  4 analogue outputs for the voltage range of from -10V DC to +10V DC
<b>Dimensions:</b>	120 x 153 x 42,2 (HxWxD)	<b>Expansions:</b>	integrated CAN interface for adaption to additional customer demands
<b>Installation:</b>	in the control cabinet door	<b>Communication:</b>	Serial RS232 interface for connecting a programming device or a modem for service purposes. A CAN interface can be used for additional expansions.
		<b>Buffer battery:</b>	Lithium battery 3V / 950 mAh, life cycle approx. 5 years