CVC 650

The electronic display and control unit CVC 650 is used for continous monitoring of hydraulic drives on centrifuges. The integrated high performance microprocessor which insures absolute precise measuring regulation (digital signal processing).

All important operation parameters can be directly adjusted on the unit. All operation parameters, measurement values and fault indications are transmitted over the selectable Interface module to the main control system. With modular valve amplifiers different types of pumps and drive versions can be connected without changing any hardware.

Plug connector terminals insure a quick and trouble free installation or exchange.

Application for:
- Pump unit VFD
- Pump unit B/C
- Full hydraulic unit E-B/C

Display of
- Bowl speed (n_{Bowl}) [rpm]
- Differential or scroll speed (n_{Scroll}) [rpm]
- Hydraulic pressures (torque) ($P_{Scroll/Bowl}$) [bar]
- Motor power [kW]
- Oil temperature (T_{Oil}) [°C]
- Bearing temperatures ($T_{Bearing}$) [°C]
- Vibration ($V_{Centrifuge}$) [mm/s]
- Pressure cut-off p2 (pre-alarm) [bar] (feed pump off)
- Pressure cut-off p3 (alarm) [bar] (bowl drive off)
- Error message

Language selection: German, English, French*, Italian*, Portuguese*, Spanish*, Dutch*, Norwegian* (* available on request)

Process control: 9 individual process regulation programs
For each regulation program adjustable :
- Bowl speed n
- Base speed Δn
- Boost pressure   p1
- Regulation stiffness α
- Pressure cut-off   p2 (feed pump off)
- Pressure cut-off   p3 (bowl drive off)

Process monitoring: Configurabele out-off points for:
- Bearing temperature pre-alarm   (feed pump off)
- Bearing temperature alarm   (bowl drive off)
- Vibration pre-alarm   (feed pump off)
- Vibration alarm   (bowl drive off)

Control of:
- Differential speed
- Bowl speed

Communication:
- Analog signals (4...20 mA)
  - $\Leftarrow$ Bowl and scroll speed
  - $\Leftarrow$ Hydraulic pressure (torque)
  - $\Rightarrow$ Mode selection
- Profibus Interface
  - $\Leftarrow$ Measured values
  - $\Leftarrow$ Status and error messages
  - $\Rightarrow$ Set point values for process regulation
- Ethernet / IP Interface
  - $\Leftarrow$ Measured values
  - $\Leftarrow$ Status and error messages
  - $\Rightarrow$ Set point values for process regulation

Technical data

Dimension unit (w×h×d):	366×281×105 mm (14.5"×11.1"×5.5")
Panel cut-out (w×h):	328×242 mm (14.0"×9.6")
Weight:	5 kg
Protection class:	Front - IP 65 (IEC 529)
	Housing - IP 20 (IEC 529)
Temperature range:	0...40 °C
Voltage range:	90...240 V-AC
Power loss:	60 W
Transient emmission:	Class B to EN 55022 (150 kHz to 30 MHz)
Conducted immunity (EMC):	± 2 kV nach IEC 1000-4-4 (Burst)
	± 1 kV nach IEC 1000-4-5 (µs-puls), wire to wire
	± 2 kV nach IEC 1000-4-5 (µs-ppuls), wire to wire)
Contact discharge:	± 6 kV nach IEC 1000-4-2 (ESD), contact discharge
Connecting terminals:	All connection terminals pluggable

Fieldbus interface:

Analog interface:	Relay control, simple PLC
Profibus Interface:	Siemens, Klöckner-Möller, ABB, Mitsubischi etc.
Ethernet/IP interface:	Rockwell, CompactLogix, ControlLogix etc.

System overview

Measured values

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