**PumpDrive R**

Self-cooling frequency inverter enabling continuously variable speed control of asynchronous and synchronous motors

Customer-specific versions with additional options available on request

**Mounting options:**

Wall-mounted or cabinet-mounted

**Protective functions:**

- Full protection by means of overcurrent limitation and PTC thermistor monitoring

- Automatic speed reduction in the event of excessively high loads and temperatures, protection against phase failure, motor-end short-circuit monitoring, overvoltage/undervoltage monitoring

- Suppression of resonant frequencies

- Cable integrity monitoring (live zero)

- Protection against dry running or hydraulic blockage

- Characteristic curve control

- Emergency operation at reduced speed in the event of excessive temperature, undervoltage or mains phase failure

**Open/closed-loop control:**

- Open-loop operation via set point setting (analog and digital input, display, field bus)

- User-definable speed (0 to 590 Hz)

- Closed-loop control via integrated PID controller

- Controlled variables: pressure, temperature, fluid level, flow rate

- Sensorless differential pressure control

- Sensorless flow rate control

- Sensorless dynamic pressure compensation for pipe friction losses (DFS curve), enabling higher energy savings

- Flow rate estimation

- Alternative setpoint

- Operation check run of the pump

- Smart logic function with 10 actions for simple drive tasks

**Operation and display:**

- Display of measured values and alerts and for setting parameters,

incl. fault history, operating hours counter (motor, frequency inverter)

- Indication of operating point (Q, H)

- Energy savings counter

- Service interface for connection to computer software

- Quick menu for quick start-up/commissioning

**PumpDrive functions**

- Programmable start and stop ramps

- Vector control with selectable motor control method (ASM, SuPremE)

- Automatic motor adaptation, overwritable by parameterisation

- Manual-0-automatic operation

- Stand-by mode (sleep mode)

- Deragging function

**Optional components:**

- Field bus modules:

- Standard: Modbus RTU

- Optional: Profibus DP, Modbus TCP, ProfiNet, Ethernet IP; Device Net

- Integrated fuse and master switch (optional)

- Connection to PumpMeter possible

- I/O extension board

**Interference suppression class:**

≤ 90 kW: EN 61800-3 C1 to EN 61800-3

≥ 110 kW: EN 61800-3 C2 to EN 61800-3

**Housing:**

- Selection between IP 55/IP54 for wall mounting and IP20 for cabinet mounting

**Design:**

* Mains voltage 3~380 V AC -10 % to 480 V AC +10 %
* (Extended mains voltage range on request: 3~200 -240V or 3~525 -690V)
* Mains frequency: 50 - 60 Hz ± 2
* Ambient temperature: -10 °C to +50 °C (power derating not included)
* Relative humidity in operation: 5 % to 95 %, non-condensing
* Analog input: 2x -10 V to +10 V, 0/4 - 20 mA
* Analog output: 1x 0/4 - 20mA
* Digital input : 4x, 24 V logic, selection of H-enabled or L-enabled, programmable
* Relay output: 2 changeover contacts, parameterisable

**Purchase order information:**

- Make: KSB

- Type series: PumpDrive R

- Material price group: 52

- Weight:

**Material number:**

**Typical tender for PumpDrive R**

**4073.521/01-EN**

**Subject to technical modification without prior notice**

**27 October 2021**