

Pump control CPS-M PLUS

... for up to 4 pumps!



Pump control CPS-M PLUS

Modular pump control CPS-M PLUS of the latest generation for more system transparency and function. They are designed for the automatic control for the **operation of up to four pumps (max. 75 kW).**

This pump control can be ideally used for pumping systems in the field of domestic waste and sewage water as well as rain water. For use in municipal, industrial, commercial and domestic applicatons.

By connecting the **optional Ethernet module** and the web server authorized users can log in anytime, anywhere via the Internet in the control CPS-M PLUS. **The pumps and systems can be monitored and operated remotely.**

Advantages

- **variable enclosure concepts**
- **high quality basic equipment in standard execution** (QVGA color touch screen, „manual-OFF-Automatic“, manual motor starter, float switch operation, level sensor or impact pressure method,.. see detailed description)
- customized solutions - **if desired, completely assembled and wired in an outer enclosure**
- suitable for the **operation of pumps and sensors in explosive areas (ATEX) ****
- **Telecontrol system** - Ethernet modul or GSM-modem for data transmission in the control unit can be retrofitted
- Simple operation via software and / or web server. USB interface for software updates or data readout via USB stick
- **different pump start-up phases** - direct starting, star/delta starting, soft starting, frequency drive



Technical details

Adjustable control parameter

- alarm relay, programmable function
- ATEX-Mode
- date / time
- phase sequence monitoring and phase drop monitoring
- turn-on delay
- on / off switch levels for each pump (alarm level)
- integrated buzzer (can be switched on and off)
- integrated time switch for compressor function
- short pump start against locking
- load changeover time for pumps
- max. pump operating time
- minimum and maximum current monitoring
- password protection
- compressor or agitator activation
- installed languages: DE, EN, FR, NL, IT, PL (other languages on request)
- power monitoring (electronical)
- power monitoring (thermal-magnetic)
- delay time / high water alarm
- delay time between pump „1“ and pump „2“
- maintenance display
- periodic emptying

Options

- alarm system 6 A5 NiMH 1,2V (power failure alarm)
- operating voltage 230V pumps
- installation in exterior columns
 - + panel heater, + flashing light, + small compressor
- MCB
- „manuell-OFF-Automatic“ (rotary or toggle switch)
- LED display for operating states (pumps)
- PTC Relais, RCD, Line protection, overvoltage protection,... integrable
- pressure sensor (measuring range 0-2 meters w.c.)
- cylinder lock for the cover
- zener barrier (for safe circuits)**

Operation and Display

- ATEX-Mode
- backlit QVGA color touch screen
- display of operating hours and switching cycles
- phase sequence monitoring and phase drop monitoring
- error list (20 fields saved retentively)
- menu navigation via backlit QVGA color touch screen:
 - graphical display and plain text display
 - graphical display - for level states
 - graphical display - for operating states (pumps)
 - graphical display - operational fault
- „manual-OFF-Automatic“ - mode selection
- plain text display
- motor current indication
- manual motor starter
- key lock
- date / time adjustable
- detailed menu with all relevant setting options
- maintenance display

Available connections

- 1 - 4 pumps
- per pump 1 thermal contact (zero voltage safe) and 1 thermal contact (automatically resetting)
- 2 x 230V / 1A output for possible small compressor
- 3 x potential-free alarm relays (3x change-over contact)
- connecting terminal (24 VDC)
- terminal blocks for network measurement
- screw terminals for level measurement
- terminal blocks for pump connection
- screw terminals for 4-20 mA analog output

Level monitoring

- 1 or 4 float switches
- impact pressure sensor (measuring 0-2 mWs) - refitted at any time
- 4-20 mA analog input e.g. for level sensor
- separate high water float switch

Technical Details CPS-M PLUS

housing	metall- / ABS-plastic housing
dimensions	depending on the equipment
cable glands	depending on the equipment
protection class	min. IP54
max. protection on site	depending on the equipment
max. power of the pump	depending on the equipment
number of pumps	1 - 4 pumps
control voltage	230V AC / 24 V DC

Technical Details CPS-M PLUS

operating voltage	400V / 230 AC 50/60 Hz (special voltages possible)
temperature range	0...+50°C
potential-free alarm relay	5A (2A induktiv)
analog output	4 20 mA

* Photo shows optional accessories. Please refer to the back!

** The rules of the DIN EN 60079 to be observed! The pump control is only provided for the „safe area“.

***Technical changes and mistakes reserve.



Equipment features CPS-L/ CPS-B / CPS-B SA & CPS-M PLUS

Connection Systems	CPS-L	CPS-B ^{NEW!}	CPS-B SA ^{NEW!}	CPS-M PLUS
Number of Pumps	1	1 / 2	1 / 2	1 / 2 / 3 / 4
Number of inputs for thermo contact monitoring per pump	1 per pump	1 per pump	1 per pump	2 per pump
230V / AC output e.g. for heater or small compressor	•	•	•	•
Number of potential-free alarm relays	1 x	3 x 1 pump 3 x 2 pump	3 x 1 pump 3 x 2 pump	3 x 1-2 pump/ 6 x 3-4 pump
Float switch terminal for emergency operation function	○	•	•	○
Modular terminals for main supply	•	•	•	•
Modular terminals for pump connection	-	-	•	•
Possible level monitoring	CPS-L	CPS-B	CPS-B SA	CPS-M PLUS
1 float switch	•	•	•	1-2 pump
2 float switches	•	•	•	1-2 pump
3 float switches	-	•	•	1-2 pump
Separate high water float switch (positive pump actuation)	•	•	•	•
4-20mA analog input	•	•	•	•
Impact pressure method 0-2 m	○	○	○	○
Pressure switch connection	-	-	-	-
Adjustable control parameters	CPS-L	CPS-B	CPS-B SA	CPS-M PLUS
Run-dry monitoring	-	•	•	•
On / off switch levels	•	•	•	•
High water level / alarm level	•	•	•	•
Pump follow-up time	•	•	•	•
Load changeover time for pumps	-	•	•	•
Max. pump operating time (STOP + ALARM / ALARM)	•	•	•	•
Delay time between pump 1 and pump 2	-	•	•	•
Current measurement per pump	○	•	•	•
Turn on delay after a power failure	•	•	•	•
Short pump start against locking	•	•	•	•
Periodic emptying	•	•	•	•
Delay time high water	•	•	•	•
ATEX-Mode	•	•	•	•
Unit of measurement (mm, cm, mbar,...) selectable	-	•	•	•
Language selection	D / GB / NL / F / I	D / GB / NL / F / I	D / GB / NL / F / I	D / GB / NL / F / I
Date / time adjustable	•	•	•	•
Maintenance display	•	•	•	•
Compressor or agitator activation	-	•	•	•
Integrated time switch for compressor function	-	•	•	•
Phase drop monitoring (Ue=0V)	•	•	•	•
Phase sequence detection	•	•	•	•
Integrated buzzer (disconnectable)	•	•	•	•
Alarm relay, programmable function	-	•	•	•
Monitoring of the current limit value of the pump	○	•	•	•
Password protection	•	•	•	•
Operation and indication	CPS-L	CPS-B	CPS-B SA	CPS-M PLUS
LCD Display 2x16 illuminated signs Display	•	-	-	-
Backlit QVGA color touch screen	-	•	•	•
Graphics display / Icons	-	•	•	•
Plain text display	•	•	•	•
Menu navigation via QVGA touch screen	-	•	•	•
Menu navigation via 4 sensor keys	•	-	-	-
Hand-0-Automatic sensor keys for mode selection of the pumps	•	-	-	-
Hand-0-Automatic via touch screen	-	•	•	•
LED display for idle state	•	•	•	•
LED display for operating pump status	•	-	-	-
Operational fault LED display / buzzer	•	•	•	•
Display of all operating conditions via TFT-display	-	•	•	•
From outside operable manual motor starter	-	•	•	-
Transparent cover (lockable version available)	-	•	•	-
Cover locks in the open status	-	•	•	-
Motor current measurement and monitoring	○	•	•	•
Display operationg hours and switching cycles	•	•	•	•
Error list	•	•	•	•
Key lock	•	•	•	•
Operating and connection instructions	-	•	•	-
Connection diagram in the terminal compartment!	-	•	•	-

• Standard / ○ Option / - Not available

PUMP CONTROLS

OF THE LATEST GENERATION

NEW!



Accessories	CPS-L	CPS-B	CPS-B SA	CPS-M PLUS
Battery modul (2x lithium battery)	-	○	○	○
Battery (2 x 9 V)	○	-	-	-
Number of Zener barriers	-	max. 2	max. 2	any number
LED module	-	-	-	○
Internal heater	-	-	○	○
Overload relays	○	-	-	-
Manual motor starter	-	●	●	●
Power contactors	●	●	●	●
Leak testing for pumps	-	-	-	○
Residual current devices (each pump / whole plant)	-	x ¹	x ¹	○
Voltmeter / Ammeter	-	-	-	○
Larger ABS-plastic housing	-	-	-	○
Metal housing	-	-	-	○
Key switch	-	-	-	○
Operating hour meter	-	-	-	○
Control transformer 400/230 VAC	-	-	-	○
H-O-A (manual mode - off- automatic mode)function by menu-oper	-	-	-	○
Telecontrol system - GSM-modem	-	○	○	○
Main circuit-breaker MCP	○	●	●	○
Telecontrol system - Ethernet Modul	-	○	○	○
Control module to control a compressor	-	○	○	○
With additional exit (400V)	-	-	-	○
PTC-Relais each pump control - analysis by the thermal contact.	-	x ¹	x ¹	○
Phase drop relay with undervoltage control	-	x ¹	x ¹	○
Analog output 4-20 mA	-	-	-	●
Different LED signal lamps	-	-	-	○
Lightning protection (fine, medium, large)	-	-	-	○
Emergency voltage supply	-	-	-	○
Input terminals greater than 4qmm	-	-	○	○
Pump start-up phase - direct starting	●	●	-	●
Pump start-up phase - star/delta starting	-	-	-	●
Pump start-up phase - soft starting	-	-	●	●
Pump start-up phase - frequency drive	-	-	-	○

● Standard / ○ Option / - Not available / x¹ on request

Level control technology