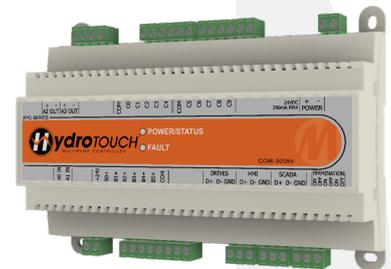


DOL & SOFT START



The HydroTOUCH range of pump controllers is an market leading, second generation multi-pump controller designed to operate up to 12 pumps. It features a wide range of advanced control options and a highly flexible array of input and output signals, both digital and analogue. Incorporating an easy set-up wizard and a user friendly touch screen, operation of these sophisticated controllers is a breeze!

HydroTOUCH controllers have been designed for four different control operations - Pressure, Level, Flow and Temperature, in DOL start, soft start and VSD configurations, and are highly customisable to suit your specific application.



HARDWARE FEATURES

Enclosure:

- IP56 rated, powder coated mild steel enclosure with inner door and removable gland plate

Protection:

- Pad-lockable mains power isolator switch
- Circuit breaker protected low voltage control and input circuitry
- Individual pump isolation
- Contactor and thermal overload protection of pump motors
- Din rail mounted terminal connections

Control & interface:

- HydroTOUCH colour touch screen HMI (See interface features)
- HydroTOUCH PCB control module
- Visual (strobe) and mutable audible (buzzer) alarms
- Soft starter per pump with adjustable soft start and stop (Soft Start version)

Inputs:

- Single phase (230Vac) or three phase (400Vac) power supply
- 2x Analog 4-20mA inputs for level, pressure or temperature transducers
- Up to 5x digital 24Vdc inputs for float or pressure switches, or thermostats
- Digital pulse input for flow meter
- Standard terminal setup: Primary and secondary level transducers, backup low and high level floats, and flow input
- Thermal switch inputs per pump (three phase only)

Outputs:

- 1-12 pump supply outputs
- BMS volt free output for common fault (additional available upon request)
- 2x Analog 4-20mA BMS outputs for analog readings
- Output for solenoid valve available upon request
- Modbus RTU Serial RS485 connections for SCADA

COMMON APPLICATIONS

- Water transfer
- Tank fill
- Sewage pump out
- Stormwater pump out
- Pressure boosting
- Hot water recirculation
- Chiller supply

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FUNCTION FEATURES

- **Multi pump control** - Control of up to 12 pumps in any number of duty, duty assist and standby pump configurations
- **Pump limiting** - For limiting max flow or power requirements
- **Duty sharing and alternation** - Adjustable duty change period and bumpless transfer
- **Pump staging and destaging** - Additional pumps are staged into operation to maintain setpoint and destaged when no longer required
- **Staggered pump start and stop** - Prevents excessive current draw and reduces water surge or hammer
- **Manual pump control** - Pump manual mode with ability to override system protections for 15 mins, before reverting back to auto mode
- **System types** - Level, pressure or temperature control modes
- **Control directions** - For emptying or filling a tank, boosting or dropping pressure and heating or cooling temperature
- **Pump 1 mode** - Pump 1 can be configured as a main pump, jacking pump or a mixer
- **Pressure control mode** - Controlled by a 4-20mA pressure transducer and optional backup high pressure switch
- **Pipe fill** - If the system wakes up and pressure is low, pipe fill runs a single pump to gently build pipe pressure and shuts the pump down if unable to build pressure within 10 minutes (Specific to pressure mode)
- **Mains bypass valve control** - Switches to mains water to bypass supply tank when pumping system is out of water or in fault condition (specific to pressure mode, available upon request)
- **Level control mode** - Controlled by 4-20mA level transducer and optional backup high and low level float switches
- **Maintain minimum level** - Ensures minimum tank level is maintained (specific to level mode, empty direction)
- **Well wash valve control** - When the system has pumped down to setpoint and the pumps have stopped, the system will open the well wash valve for 5 minutes every 24 hours (specific to level mode)
- **Tank top up valve control** - Tops up tank with mains water when normal inflow of rain or treated water into tank does not keep up with demand (Specific to pressure and level control, available upon request)
- **Temperature control mode** - 4-20mA temperature transducer and optional backup high and low temp thermostats
- **Auxiliary tank level monitoring** - Using additional level transducer in auxiliary tank, instead of backup transducer
- **UV lamp control** - Optional UV lamp control for installations that require UV filtering, with adjustable modes

FAULT PROTECTION

- **Protection modes** - Most protections feature adjustable modes including alarm (alarm only), lockout (alarm and pump shut-down) and inhibit (pump shut-down, no alarm)
- **High and low level, pressure or temperature protection** - Alarm and/or shutdown on high and low level, pressure or temperature depending on the system type, low pressure and flow feature auto restart attempts
- **Medium level protection** - Provides an additional level alarm before the high or low level is reached
- **Auxiliary tank level protection** - High and low level protection from floats or level transducer in auxiliary tank
- **Auxiliary high & low temp protection** - If using additional temperature device instead of backup transducer (specific to temperature mode)
- **Pump anti-seize protection** - Runs pumps periodically during low use to prevent seizing
- **Maximum flow protection** - Activates after pumps run at max flow for 30mins, protecting the system in the event of a burst pipe
- **Pump cycle protection** - Activates if system goes to sleep but wakes up within 5 seconds, 10 times in a row, due to a faulty non-return valve or similar fault preventing the system from maintaining pressure
- **Low flow protection** - Alarms and/or shuts down pump or system if a pump is running but there is no flow for 30 seconds, with automatic restart attempts before activating a lockout
- **Analog fault protection** - Activates faults if analog inputs fail
- **Transducer redundancy** - Switches to backup transducer if primary transducer fails (if using backup transducer)
- **Transducer discrepancy** - If difference between primary and secondary transducers exceeds a certain amount, system will use the most appropriate input relative to the setpoint to protect system from overshooting
- **Pump overload protection** - Shuts down pumps on overload, with automatic duty alternation
- **Pump thermal switch protection** - For three phase pumps
- **Filter blocked protection** - Protects the system when filters are blocked or faulty
- **UV fault protection** - Protects the system when UV filters are faulty

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INTERFACE FEATURES

- Main screen with system and pump status, active faults, analog values
- Individual pump monitoring screen with status, run hours, number of starts, manual control with ability to override system lockouts
- Graphical overview screen for monitoring overall system operation
- Alarm screen with date and time stamped faults
- Logged data screen with water usage graph, trend graphs for pressure, level and flow, pump run timers and system event counters
- System diagnostics screen for easy fault finding, pump rotation testing
- User friendly setup wizard for easy commissioning
- Advanced parameter adjustment



HydroTOUCH PUMP CONTROLLERS - DOL & SOFT START

Code	No of Pumps	Phases / Voltage	Overload Rating Options	Soft Starter Rating Options	Enclosure Size
FPC-43141	Single	1 Phase / 230Vac	-AA to -E	N/A	500x500x300mm +
FPC-43143	Single	3 Phase / 400Vac	-AA to -E	-\$4.0 to -\$90	500x500x300mm +
FPC-43241	Dual	1 Phase / 230Vac	-AA to -E	N/A	500x500x300mm +
FPC-43243	Dual	3 Phase / 400Vac	-AA to -E	-\$4.0 to -\$90	500x500x300mm +
FPC-43341	Triplex	1 Phase / 230Vac	-AA to -E	N/A	500x500x300mm +
FPC-43343	Triplex	3 Phase / 400Vac	-AA to -E	-\$4.0 to -\$90	500x500x300mm +
FPC-43441	Quad	1 Phase / 230Vac	-AA to -E	N/A	600x600x300mm +
FPC-43443	Quad	3 Phase / 400Vac	-AA to -E	-\$4.0 to -\$90	600x600x300mm +
FPC-43541	Quintuple	1 Phase / 230Vac	-AA to -E	N/A	TBA
FPC-43543	Quintuple	3 Phase / 400Vac	-AA to -E	-\$4.0 to -\$90	TBA
FPC-43641	Hextuple	1 Phase / 230Vac	-AA to -E	N/A	TBA
FPC-43643	Hextuple	3 Phase / 400Vac	-AA to -E	-\$4.0 to -\$90	TBA

Note: Enclosure sizes will increase for soft starters and high overload ratings, and optional additions
Additional panels for up to 12 pumps available

OVERLOAD RATING GUIDE

Code Suffix	Amp Rating
-AA	1.6 - 2.5 Amp
-A	2.5 - 4 Amp
-B	4 - 6 Amp
-BB	5.5 - 8 Amp
-C	7 - 10 Amp
-D	9 - 13 Amp
-E	12 - 18 Amp

Additional overload ratings available on request

For FLCs greater than 18 Amps, soft starters are recommended

SOFT STARTER GUIDE

Code Suffix	kW Rating
-\$4.0	4.0 kW
-\$5.5	5.5 kW
-\$7.5	7.5 kW
-\$11	11 kW
-\$15	15 kW
-\$22	22 kW
-\$30	30 kW
-\$37	37 kW
-\$45	45 kW
-\$55	55 kW
-\$75	75 kW
-\$90	90 kW

Additional kW ratings up to 160kW available on request

OPTIONAL MODIFICATIONS

- Additional BMS volt free outputs
- With ME-Link SMS Module for SMS alarm/status messaging
- With rain/mains changeover control module and 12Vdc pulse latching solenoid valve
- Generator input socket and manual changeover switch, or automatic changeover
- Output for normally closed tank top up or well wash valve
- Individual pump RCD protection
- 316 stainless steel enclosure
- Free standing enclosure with plinth
- Separate compartments for power authority meter
- Battery backup high level alarm
- Conductivity relays and probe inputs
- Modbus TCP gateway with ethernet port