



ENGINEERING FLOW SOLUTIONS

PROTECTION & CONTROL PANELS

HMS Control L3 series



HMS Control L3 series Panel for a single pump

APPLICATION

The HMS Control L3 panels are intended for control and protection of the electric motors driving single borehole, submersible, or surface installation pump (overhung, double suction, etc.) in the following applications:

- Water supply from boreholes, wells
- Level control in storage tanks
- Pressure maintenance in water supply systems
- Dewatering systems, drainage of reservoirs, open pits, etc.

APPLICABLE SENSORS

- Pressure relay
- Electric-contact manometer
- Floating sensors of level
- Electrode sensors of level

FEATURES

- Pump switching off at overload/underload (protection from «dry running», without sensors)
- Water level control in a borehole using the «dry running» sensor
- Control of mains voltage
- Phase rotation, break, distortion
- Resistance check of the motor winding before a pump start
- Motor winding temperature control (optional, sensor is required)
- Fault control of connected sensors
- Pump shutdown in case of external accident signal
- Short circuit protection
- Surge voltage protection



USER INTERFACE PANEL



Display items on the user interface panel:

- Condition of connected sensors
- Current consumption
- Voltage on each phase
- Total hours of pump operation (hours/minutes)
- Total number of motor starts
- List of recent failures

PANEL DESIGNATION

HMS Control L3-120-M.T-IP54

HMS Control L3 - XXX - X - X.X.X - IP54

Panel series

Pump maximum current, A

Pump starting method:

no mark – DOL starting

P – soft starting

Available options:

H – Overvoltage protection

M – Surge voltage protection

P – Switch-disconnector at the panel cover

T – Motor winding temperature sensor

IP54 – Panel casing protection

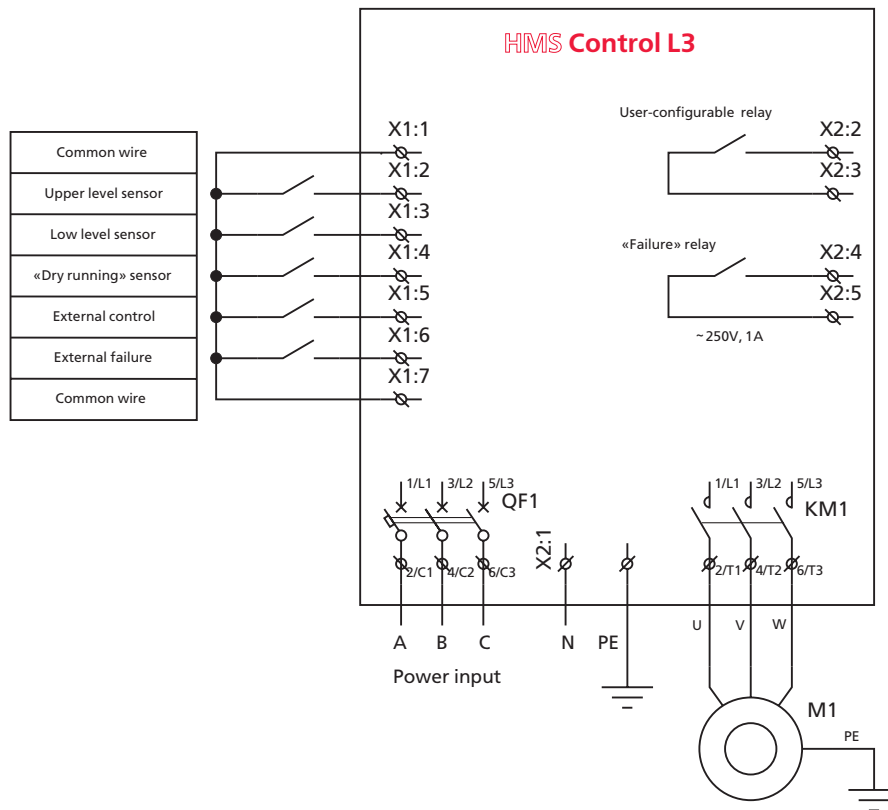
TECHNICAL DATA

Supply voltage	3x380 V (+10%, -15%), 50 Hz, N, PE	
Number of connected motors (pumps)	1	
Motor rated current	1...300 A*	
Motor power	до 132 kW*	
Motor starting method	DOL or soft-starting	
Ambient temperature range	+1...+40°C	-40...+40°C
Relative humidity	80% at 25°C	100% at 25°C
Casing protection	IP54	

Input signals (connected sensors)	Output signals
<ul style="list-style-type: none"> — «Dry running» sensor — Pressure relay or electric-contact manometer — Upper level sensor — Low level sensor — Input «External control» — Input «External Failure» — PT100 / PTC temperature sensor** 	<ul style="list-style-type: none"> — Relay «Failure» — User-configurable relay: <ul style="list-style-type: none"> — «Panel in operation» (power is on, no signals of failure) — «Failure» — «Motor is on» — «External failure» — «External control» — «Upper level sensor activated» — «Low level sensor activated» — «Dry running»
Sensors circuit voltage: 15 V, DC	Relay commutation capacity: ~250 V, 1 A

* Panels with power over 132 kW are available by request. ** Option; shall be specified on the order placement

CONNECTION SCHEME



STANDARD VERSIONS

Direct-on-line start	Soft start	Rated current, A	Motor power, kW*
HMS Control L3-25-IP54	HMS Control L3-25-P-IP54	1...25	1.1...9
HMS Control L3-40-IP54	HMS Control L3-40-P-IP54	20...40	11...17
HMS Control L3-60-IP54	HMS Control L3-60-P-IP54	35...60	18.5...22
HMS Control L3-80-IP54	HMS Control L3-80-P-IP54	55...80	27...37
HMS Control L3-100-IP54	HMS Control L3-100-P-IP54	75...100	45
HMS Control L3-120-IP54	HMS Control L3-120-P-IP54	95...120	50, 55
HMS Control L3-160-IP54	HMS Control L3-160-P-IP54	115...160	65, 75
HMS Control L3-200-IP54	HMS Control L3-200-P-IP54	155...200	90
HMS Control L3-250-IP54	HMS Control L3-250-P-IP54	195...250	110
HMS Control L3-300-IP54	HMS Control L3-300-P-IP54	245...300	132

Available options:

H – overvoltage protection: the panel is switched off the mainline

M – surge protection (lightning and connection surges)

P – switch-disconnector at the panel cover

T – motor winding temperature sensor (PT100/PTC)

* Approximate values are given. Some pumping units may have different rated current values at given power. Please refer the manual.

HYDROMASHSERVICE is an integrated commercial and engineering company of the HMS Group.

Please forward your queries to below contact details:

12, Aviakonstruktora Mikoyana str.,
Moscow, 125252, Russia

Phone: + 7 (495) 664 8171
Fax: + 7 (495) 664 8172

e-mail: hydro@hms.ru
www.hms.biz

The manufacturer of the HMS Control Panels is HMS Livgidromash (HMS Group)

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