



ENGINEERING FLOW SOLUTIONS

PROTECTION & CONTROL PANELS

**HMS Control L4 series**



# HMS Control L4 series

## Panel for a single pump remote control

### APPLICATION

The HMS Control L4 panels are intended for 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.

### FEATURES

- Quick mode selection and simple adjustment («Quick start»)
- Applicable sensors types: contact, electrode, analog 4..20 / 0..20 mA
- A wide range of panels for up to 132 kW electric motors (panels over 132 kW are optionally available)
- Pump compartment burglar alarm
- RS-485/RS-232 interface, Modbus RTU protocol
- GSM/GPRS modem or 433 MHz radio band data transmission (option)
- Pump control and status reports by Short Messaging Service (SMS) available as option

### PROTECTION

- Short circuit
- Electric motor underload / overload
- Dry running, including sensor-free protection
- Motor winding insulation pre-start check
- Phase sequence, phase break, phase distortion
- Number of pump starts per hour
- Voltage surge/lightning protection (option)



### PARAMETERS INDICATION

- Average current and voltage on each phase
- Sensors status
- Pressure in discharge pipeline or water level in storage tank (analog sensor is required)
- Motor winding temperature (sensor is required)
- Alarm log (with time and equipment status recording)
- Number of starts and total operation time

**All parameters can be transmitted via RS-485 (RS-232), Modbus RTU protocol.**

### CONTROL MODES

- Manual
- Automatic by commands from pressure/level sensor or timer
- Remote by RS-485/RS-232 or digital inputs

## PANEL DESIGNATION

**HMS Control L4-120-SS-M.GPRS-IP54**

**HMS Control L4 - XXX - SS - X.X.X - IP54**

Panel series

Max rated current, A

Starting method: (Direct-on-line – no mark; **SS** – soft starting)

Options:

**P** – Main switch/disconnector

**M** – Surge/ lightning protection

**GPRS** – Data transmission via GSM cell network

**RDM** – 433 MHz radio band data transmission

**SMS** – Control and status reports by Short Messaging Service (SMS)

**2T** – Pump bearings temperature control (2 sensors)

**4T** – Pump and motor bearings temperature control (4 sensors)

**IP54** – Panel casing protection

## TECHNICAL DATA

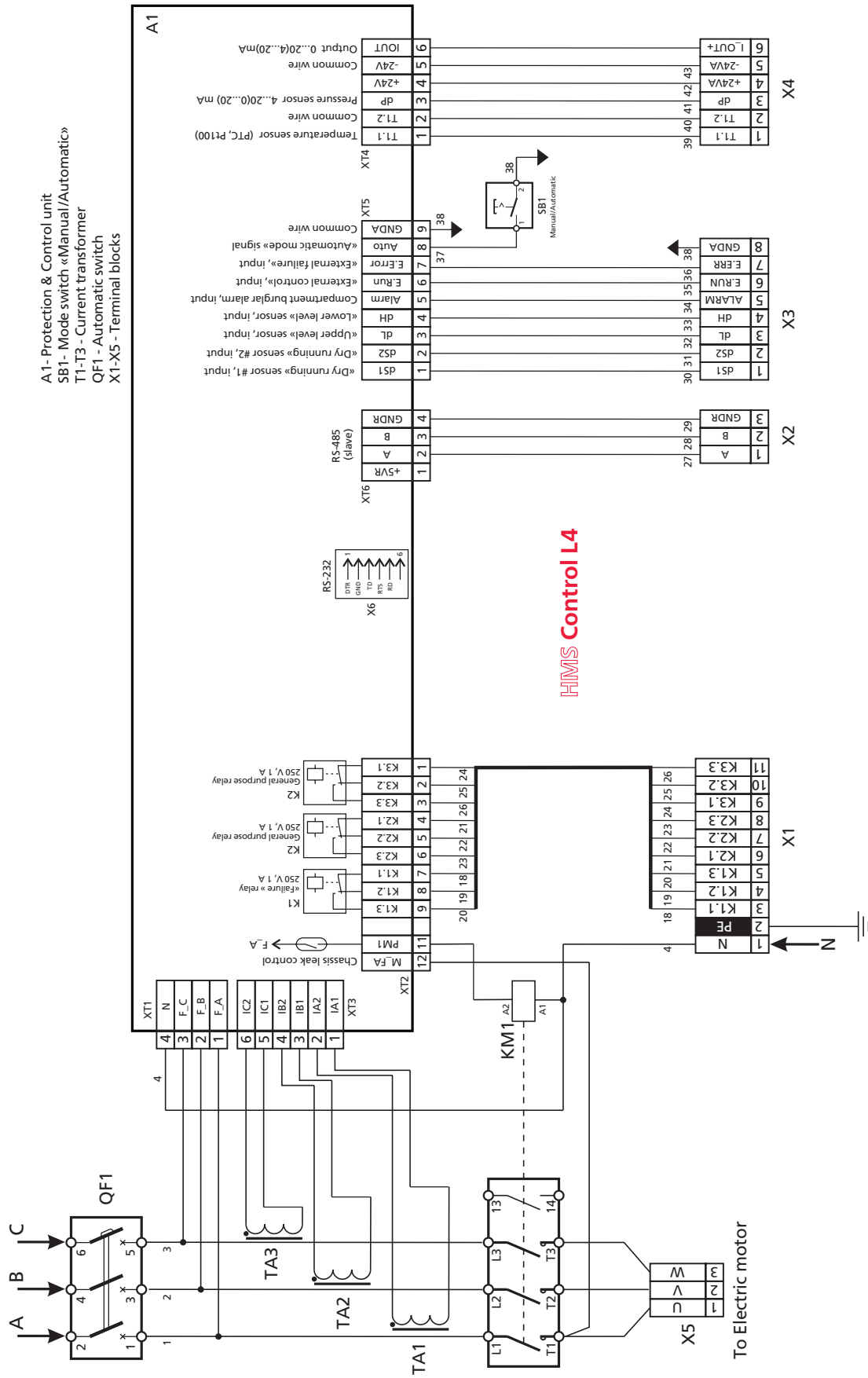
Supply voltage	~3x380V / 50 Hz, N, PE
Number of connected pumps	1
Starting method	soft / direct-on-line
Sensors	<ul style="list-style-type: none"> <li>— digital (contact or electrode) - 2 units</li> <li>— analog (4..20 mA, 0..20 mA) - 1 unit</li> <li>— «dry running» - 2 units</li> <li>— temperature (thermoswitch, PTC or PT100) - 1 unit (up to 5)</li> </ul>
Relay output (~ 250V/1A)	3
Ambient conditions	indoor installation (+1...+40°C, relative humidity 80% at 25°C) outdoor installation (-40...+40°C, relative humidity 100% at 25°C)

## STANDARD VERSIONS

Direct-on-line start	Soft start	Rated current, A	Motor power, kW*
HMS Control L4-25-IP54	HMS Control L4-25-P-IP54	1...25	1,1...9
HMS Control L4-40-IP54	HMS Control L4-40-P-IP54	20...40	11...17
HMS Control L4-60-IP54	HMS Control L4-60-P-IP54	35...60	18,5...22
HMS Control L4-80-IP54	HMS Control L4-80-P-IP54	55...80	27...37
HMS Control L4-100-IP54	HMS Control L4-100-P-IP54	75...100	45
HMS Control L4-120-IP54	HMS Control L4-120-P-IP54	95...120	50, 55
HMS Control L4-160-IP54	HMS Control L4-160-P-IP54	115...160	65, 75
HMS Control L4-200-IP54	HMS Control L4-200-P-IP54	155...200	90
HMS Control L4-250-IP54	HMS Control L4-250-P-IP54	195...250	110
	HMS Control L4-300-P-IP54	240...300	132

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

**CONNECTION SCHEME**



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

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