



Basic functions

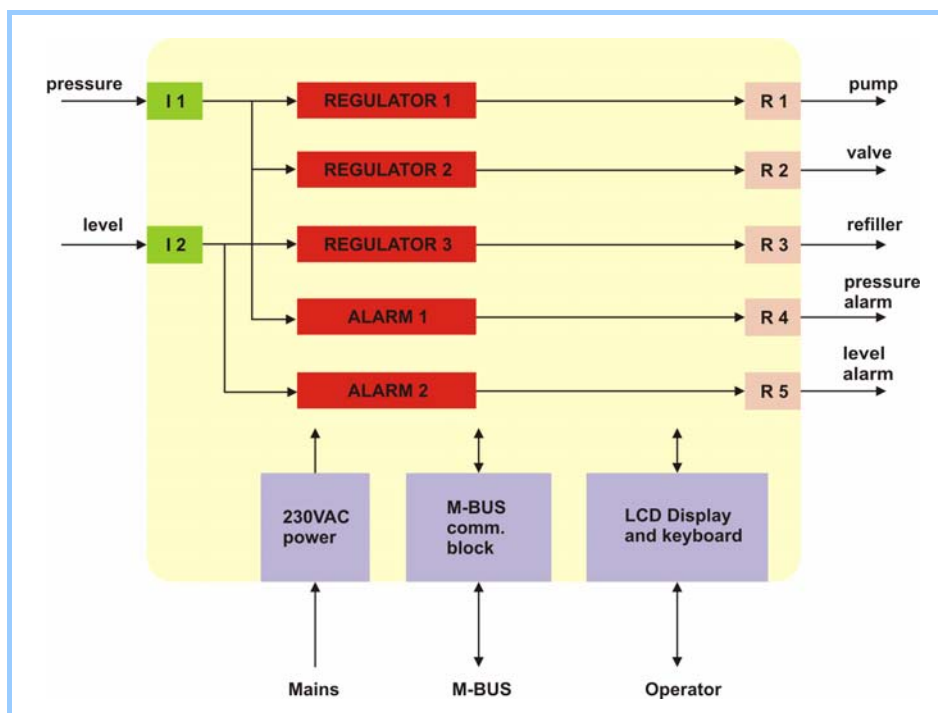
- Operates up to three independent regulating loops
- Control of valves, pumps ...
- Two analog inputs 4-20mA
- Three control relay outputs
- Two alarm relay outputs
- LCD display with keyboard
- M-Bus communication acc. to EN1434-3 standard
- Control parameters adjustment

Description

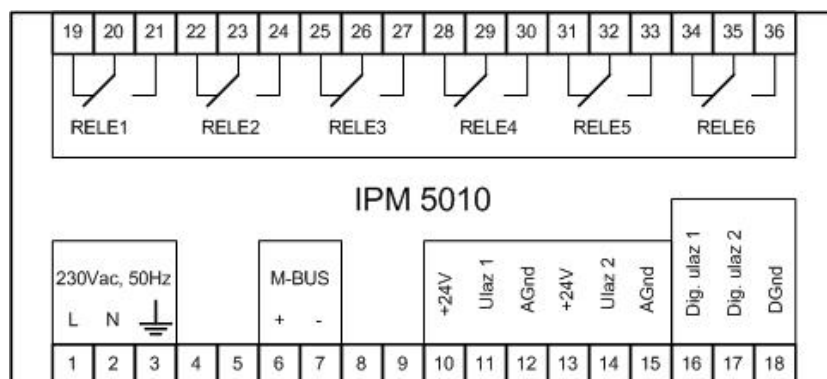
Main purpose of Microprocessor Control Unit is measuring and regulating of pressure and water level in expansion vessels of heating systems. Measurements are taken by means of two 4-20mA analog inputs connected to transmitters of pressure and level. Transmitters are powered by Control Unit. Regulating is realized by two switching relay outputs connected to pump and solenoid valve. Setting and readout of assigned values, as well as allowed variation and other parameters are done by display and keyboard. Two alarm outputs with adjustable threshold are used for signaling of pressure/level overdrive.

One of the regulating outputs can be used to control automatic refilling device. Communication with Control Unit is done according to M-Bus slave standard.

Block diagram



■ Connection diagram



■ Specifications

Display and keyboard	Alphanumeric LCD with 2 x 16 characters, 4 button keyboard. Setting and reviewing of all operating parameters (assigned values, allowed variations, measured values, alarm limits ...).
Regulator functions	Two independent regulating loops for control of pump and solenoid valve, as well as automatic control of refilling tank.
Parameter range	Adjustable from 0 to 100% across full scale. Applies for assigned values, allowed variations, alarm values.
Regulator inputs	Two analog inputs for current loop signals 4-20mA, used for pressure and level measuring. Detection of short circuit and loop breakage.
Measuring resolution	12 bit, $V_{lsb} = 25mA / 4096$
Loop Power Supply	supplied from device, 24V / 50mA
Regulator output	Three electromechanical relay outputs, 250VAC/2A, switching
Alarm function	Two electromechanical relay outputs, 250VAC/2A, switching
Communication standard	M-BUS, Slave type, according to IEC standard EN1434-3 enables readout of all device parameters.
Working parameters backup	Permanent Flash memory. In case of power interruption, data are being stored for minimum 10 years.
Connectors	Disjoinable screw clamp with 5mm raster.
Power Supply	Mains, 230VAC 50Hz, max. 5VA
Dimensions	103 x 85 x 58 mm
Weight	450 g approximately
Enclosure protection	IP40
Temperature operating range	from -20°C to +55°C from 0 to 95% RH (without condensation)
Mounting	DIN rail 35 mm