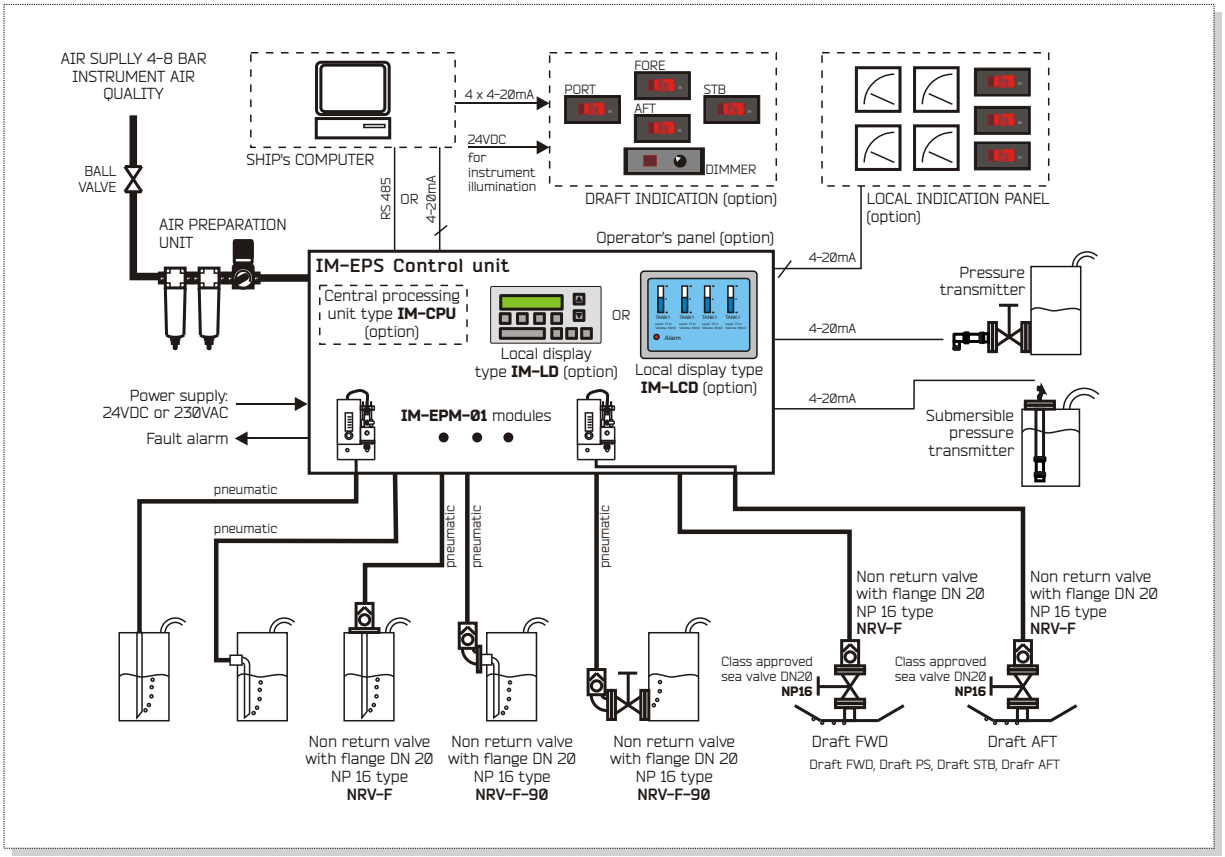
IM-EPS

Electro-Pneumatic Level Measurement System



Inel-mar Electro Pneumatic System **IM-EPS** is designed to measure level of all types of liquids in all types of tanks (ballast tanks, service tanks…). It can also be used for level detection in void spaces or for water ingress detection. Main advantage of Inel-mar Electro Pneumatic System is that sensing element and electronics are not in contact with the measured liquid, but are mounted in the common control unit instead. System is highly flexible and can be upgraded with local displays, different types of pressure transmitters, local indication panel, draft indication panel…

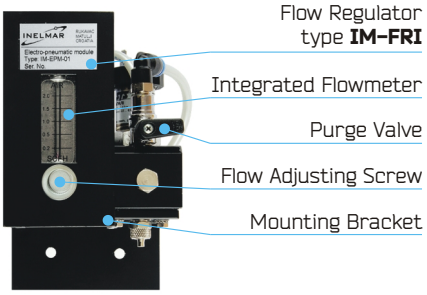
System is configurated in a way that each electro pneumatic measuring point has one separate module (IM-EPM) with pressure transmitter, flow regulator and indicator, purging possibility and manifold. Basic output from each measuring point is 4-20mA but with upgrades different possibility occurs (local display, RS 485 communication with other systems...).

Inel-mar EPS System consists of:
- Air preparation unit
- IM-EPS control unit
- Non-return valves

Measuring lines, tank penetrations and sounding pipes are supplied by yard.

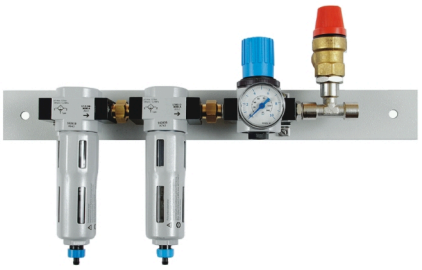
Electro-Pneumatic Module (type **IM-EPM-01**)

Electro-Pneumatic Module IM-EPM-01 as a basic part of our Electro-Pneumatic System provides constant air flow to the tank and measures hydrostatic pressure which coresponds to 4-20mA as output.



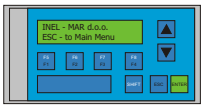
Air Preparation Unit (type **IM-APU**)

Air preparation unit supplies system with adequate quality of air. A pressure regulator and relief valve as parts of the air preparation unit protect the system from the overpressure. Each our unit comprises filters, pressure regulator and relief valve (IM-APU-01) while type IM-APU-02 comprises membrane dryer and type IM-APU-03 adsorption dryer.

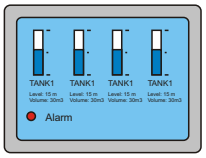


Local Displays (type **IM-LD** and **IM-LCD**)

Local displays type IM-LD and IM-LCD provide information on the status of measuring points (input current from pressure transmitters, alarm status, present liquid level). Liquid density and offset can be changed in programming mode. Local display type IM-LD provides 2-line alphanumeric display while IM-LCD provides graphic display. Local displays come with central processing unit type IM-CPU.



Local Display type **IM-LD**



Local Display type **IM-LCD**

Non Return Valves (type **IM-NRV**)

In case that Electro-Pneumatic Control Unit is mounted below the top of the tank, non return valves must be used. In case of air supply failure, they prevent liquid from entering the measuring lines. Different type of process connections available.

Technical Data

- Measuring range: 0...16 mH20 or 0-25mH20, at request any range possible
- Overpressure: 3 x full scale, minimum 3 bars
- Power supply: 24VDC or 120/230VAC 50/60Hz
- Output signal: - Basic output 4-20 mA,
  - RS485 (RTU slave, modbus protocol when IM-CPU is used)
- Air supply to air preparation unit: 4 - 8 bar, dry and clean instrument air (pressure from air preparation unit adjusted to 2,5 bars, max. 3 bars allowable)
- Air consumption: approx. 10 l/h per measuring point (depending on flow adjusted)
- Accuracy: <0,25 % (hysteresis and repeatability)
- Operating temperature (IM-EPS control unit): 0...55°C
- Enclosure (IM-EPS control unit): IP 54

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