Velan online valve monitoring solutions
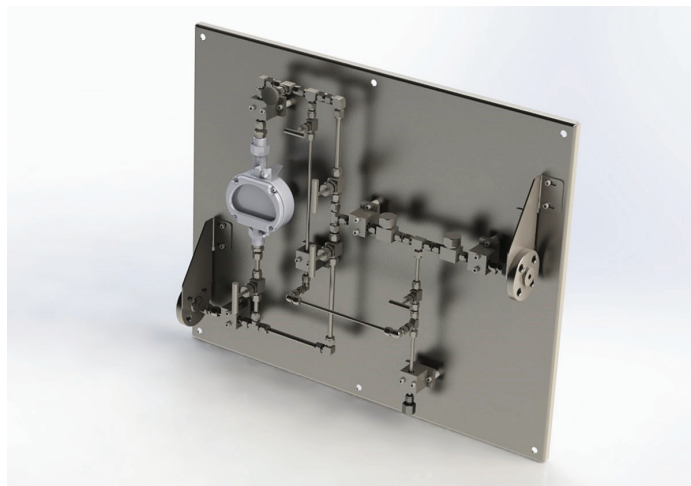
QS Quick sheet

Programmable Logic Controller (PLC) and Local Control Panels

Velan Programmable Logic Controller (PLC) and Local Control Panels are part of the full package of valve automation, control, and monitoring solutions.

Design features and benefits

- Includes programmable logic controller and hard-wired panel complete with switch and inlet.
- ISO interlocks.
- Works in conjunction with electrically operated valves for remote monitoring.
- Human-machine interface (HMI) diagnostic feature provides control of interlock and permissives and redundancy (power, processor, I/o).
- HMI screen system for monitoring.
- DCS communication and handshaking.
- Intrinsically safe signals option.
- Integration with ancillary equipment.
- Full in-house acceptance testing.
- Full commissioning, start-up and service supports onsite.
- Steam purge monitoring system to ensure optimal performance for delayed coker valves.
- Oil purge monitoring system to optimize flow process conditions for ebullated bed application.
- Heat tracing monitoring system for ebullated bed skid.
- Critical valves performance monitor system for preventive and predictive maintenance of critical applications in refinery, mining, chemical and power plant.
- Valve performance diagnostic data can be monitored on-site, monthly subscription, per visit or 24/7 live.

PLC Main Design Standards

Standards and Approvals	ATEX, IECEx, CCC Ex, FM approval, UL approval , CSA marine approval
SIL Capabilities	Up to SIL3 according to IEC 61508 and IEC 62443
Protocols	PROFINET, PROFIBUS, ETHERNET, Ethernet/IP, DeviceNet, MODBUS, Electromagnetic Compatibility (EMC): IEC 61000-4-2, IEC 61000-4-4, IEC 61000-4-5
Programming Languages	Ladder logic (LD), Function Block Diagram (FBD) , Structured Text (ST), Sequential Function Chart (SFC)
Degree and Class of Protection	IP20, IP65, IP67

Velan Torque Monitoring System

- 24/7 live and secured measurement of valve operating torque, valve stroke pattern combined with process parameters.
- 24/7 long distance wireless data transmission and monitoring by Velan and/or third-parties.
- Setup of different macros to predict valve maintenance needs based on the collected data.

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PLC Testing

- Control system architecture layout
- Logic diagram
- IO list
- PLC panel drawings PLC programming
- FAT (Factory Acceptance Test)
- SAT (Site Acceptance Test)
- Commissioning and site support

Cloud Platform

The Velan.IO cloud platform has a secured 24/7 access to live monitoring, historical charting, active alerts and alarms that are fully customizable. The interface is adjusted to match the End-user P&ID and instrumentation.

As cybersecurity standards continue to evolve, Velan remains committed to maintaining compliance through active engagement with leading industry organizations, including the American Petroleum Institute (API), the International Organization for Standardization (ISO), and federal agencies.

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