

smartLift Retrofit

Intelligent Artificial Lift Retrofit Controller



Innovative Artificial Lift Solutions

smartLift Retrofit is an Intelligent Artificial Lift Retrofit Controller that upgrades existing industrial drives for ESP, PCP, HPS, and centrifugal pump applications. It combines advanced lift control, touchscreen HMI, data logging, and downhole sensor integration in a rugged outdoor-rated enclosure, enabling fast modernization without replacing installed drive hardware.



Ratings and Features

| | |
|-------------------------|---|
| INPUT VOLTAGE | 110 V to 240 VAC; 50/60 HZ; 1 PHASE |
| GENERAL DESCRIPTION | ARTIFICIAL LIFT CONTROLLER |
| PROTECTION DEGREE | NEMA 3R |
| ENCLOSURE MATERIAL | ALUMINIUM |
| DIMENSIONS | 600 x 835 x 347,5 MM (W x H x D) |
| WEIGHT | 35 KG |
| MOUNTING | WALL MOUNT |
| ENVIRONMENTAL USE | INDOOR / OUTDOOR |
| TEMPERATURE RATING | -20...+50 °C NOT CONDENSING |
| INTERFACE CONTROLS | 10,1" MULTILANGUAGE COLOURED HMI ALC (ARTIFICIAL LIFT CONTROLLER) WITH: 8x AI (5x4-20MA, 3XPT-100) 16 x DI 16 x DO MODBUS TCP/IP |
| LOGGING | 32 GB OF DATA AND EVENT LOGGING "ESP ON START", "ESP ON TRIP", "1 MINUTE", "10 MINUTES". EXPORT TO USB-STICK IN CSV FOMAT. |
| SUPPORTED DRIVE CHASSIS | MITSUBISHI FA840/F842 , ABB ACS880, TOSHIBA S7, DELTA MVF |

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3R

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Features

- OUTDOOR-RATED ENCLOSURE WITH ANTI-CORROSION BODY.
- DESIGNED FOR RELIABILITY AND EASE OF MAINTENANCE.
- REMOVABLE GLAND PLATES FOR FLEXIBLE CABLE ENTRY.
- OPTIMIZED FOR FAST INTEGRATION WITH EXISTING DRIVE SYSTEMS.
- REDUCED WIRING EFFORT FOR QUICKER COMMISSIONING.
- ESP, HPS, PCP, AND CENTRIFUGAL PUMP APPLICATIONS.
- NATIVE SUPPORT FOR DOWNHOLE SENSOR INTEGRATION AND MONITORING.

Highlights

Intuitive Operation

Colored, full-text touchscreen HMI for setup, operation, and programming.

Multi-Language Support

English, German, Romanian, Ukrainian; additional languages on request.

Industrial Controller

Artificial Lift Controller with Mitsubishi Electric PLC and HMI.

Flexible I/O

16 digital inputs, 16 digital outputs, 5 analog inputs (4–20 mA), 3 RTD (PT100) inputs, Modbus TCP/IP.

Versatile Operation Modes

Local control, remote control via hardwired signals, and network control.

Advanced Control Modes

HMI, remote 2-wire and 3-wire, network control, PID, duty cycle, rocking start, I-limit, and delta pressure mode.

Comprehensive Protection

Overload, underload, stall prevention, DC-bus under/overvoltage, phase loss, and ground fault

Downhole Sensor Integration

Intake pressure, discharge pressure, motor temperature, and vibration (X/Z) monitoring.

Broad Sensor Compatibility

Oil Dynamics, Oxmos, Zenith, Triol, Phoenix, and custom sensors.

Additional Protection Functions

Backspin detection, low output frequency monitoring, discrete and analog input supervision.

Operational Features

Auto-restart after power-up, automatic restart after minor trips, wellhead voltage and current display.

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