smartLift Retrofit

Intelligent Artificial Lift Retrofit Controller

OILDYNAMICS
Lifting Energy

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	ARTIFICAL 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 (ARTIFICAL 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

smartLIFT SL 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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