LIFTMASTER™
CONTROL PLATFORM

TECHNICAL SPECIFICATION

Rev 1.0 September, 2008

LIFT MASTER FEATURES

The Lift Master hardware control platform has been designed to provide exceptional POC and a long service life in the harsh environment associated with oil fields. Even with a low price, this controller incorporates many features found on more expensive controllers and uses high quality parts throughout. The Lift Master hardware platform can be programmed to perform all of the required functions needed for complete oil well protection and control. All Lift Master controls feature:

- Large high quality graphic VFD display
- Sealed industrial 4 button key pad
- Wide operating temperature range
- Simple menu driven user interface
- Battery backup protection for power failures
- 2 high accuracy analog input channels
- 2 high frequency pulse input channels
- 2 high power output drivers
- 4 discrete input channels, pull low
- Discrete alarm input, pull up
- Standard load cell input channel
- RS-485 Modbus serial port
- 2 form C relay outputs*
- 2 Analog inputs 4-20mA or 0-5VDC*
- 2 discrete input channels, pull low*
- 4 OC discrete output channels 40VDC*
- 10^{th} order digital filter to smooth out display readings

* Denotes optional I/O available with XP version

The Lift Master hardware control platform is field programmable to perform all oil well control functions for either beam or Rotoflex type pumping units. Utilizing a distributed control topology, complete oil well control is possible by placing Lift Master controllers where control is required. This approach simplifies field control, reduces overall system cost, adds robustness to control system, and makes for a user-friendlier interface at each pumping unit. The Lift Master control platform can be programmed to operate the following pumping unit drive methods:

- Across the line contactor drive
- Soft starter drive
- Variable frequency unit drive
- Custom functions available

TECHNICAL SPECIFICATION

GENERAL		
Size	10.5” x 8.5” x 2.5”	H x W x D
Operating Temperature	-40 to 70	°C
Storage Temperature	-45 to 85	°C
Humidity	0 to 90	% Relative NC
AC INPUT		
Voltage	85-150	VAC
Power	10	W
Frequency	50-70	Hz
Fuse (5mm x 20mm)	¼	A
ANALOG INPUTS (2)		
Input Current	4-20	mA
Input Current Max	50	mA
Input Impedance	100	Ω
Input Voltage	0-5	VDC
Accuracy	1	%
Linearity	0.05	%
PULSE INPUT (2)		
Input Voltage Count	2.5	VDC
Input Voltage Max	32	VDC
Input Frequency Max	2.5	kHz
DISCRETE ALARM INPUT		
Input Voltage (ON)	5	VDC
Input Voltage (OFF)	0	VDC
DISCRETE INPUT (4)		
Input Voltage OC	5	VDC, Max
Input Voltage (ON)	0	Pull to ground
ANALOG SENSOR SUPPLY		
Type	Current Limited	
Output Voltage	12	VDC
Output Current Max	100	mA
Output Impedance	120	Ω
5V DISCRETE SUPPLY		
Type	Current Limited	
Output Voltage	5	VDC
Output Current Max	75	mA
Output Impedance	50	Ω
DRIVER OUTPUT (2)		
Type	Solid State Relay	
Voltage Max	240	VAC
Current Max	3	A
RS-485 PORT		
Configuration	9600,8,1	
Parity	None	