



## Lincoln's New Product Lineup for the Natural Gas Compression Industry

Innovative solution designed to protect your compressors against untimely lubrication faults or "no flow" conditions.

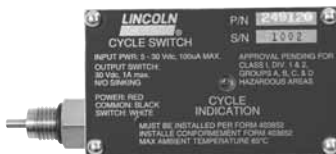
### Model 87630 Datalogger Lubrication Monitor

- Three mounting options
- Two primary power sources available
- Continuously monitors the packing and cylinder lubrication system
- Download feature allows history to be transferred to a CSV report via a USB flash drive in less than a minute
- Store data for up to one year
- No special software or hand-held hardware device needed
- One model will monitor either a single or dual lubrication system
- Designed for use with Reed or Hall effect cycle switches

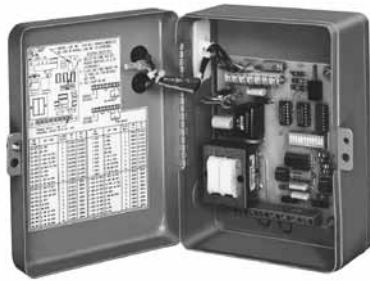
<b>Part No.</b>	<b>87630</b>
<b>Input Power:</b>	10-30 VDC 0.25 Amp Max.
<b>Internal Battery:</b>	3.6 V Long-Life Lithium Tadiran TL-5930, battery life 4-6 years
<b>Output Switches:</b>	2 each open drain sinking FET's, rated 30 VDC 500mA max.
<b>Ambient Temp. Range:</b>	Operation, -40°C to 85°C (-40°F to 185°F) LCD -20°C to 70°C USB Download 0°C to 70°C
<b>Display:</b>	2x16 Backlit Character
<b>Input Cycle Range:</b>	5 to 300 seconds
<b>Units of Measure:</b>	Pints, liters or gallons
<b>Alarm Time:</b>	Adjustable from 5 to 300 seconds
<b>Switch Response Time:</b>	250 mS max.
<b>USB Download Port:</b>	USB 2.0 compliant, accepts universal flash drive
<b>Data Log File Format:</b>	Comma-Separated Values File (CSV) for use in programs including Microsoft® Excel
<b>EX Rating:</b>	Approval pending for Class I, Groups A, B, C & D, Div. 2 CE, II 3G Ex Na IIA

## Cycle Switch and Accessories for use with Datalogger Lubrication Monitor

Designed to work with Lincoln MC, MC<sup>2</sup> HP valves as well as with other brands. Simple installation reduces labor costs. Features captured magnet assembly and Hall Effect Switch. The industry's FIRST cycle switch with a cycle indicator light.



Model	Description	Power Req.	Maximum Working Pressure	Temp. Range	Material	EX Rating
249120	Hall Effect Cycle Switch for Lincoln MC <sup>2</sup> -HP series blocks	5 to 30 VDC, 100 UA max.	7500 psi	-40°C to 85°C (-40°F to 185°F)	Aluminum Housing, Stainless Steel Magnet Assembly	Approval pending for Class I, Groups A, B, C & D, Div. 1 & 2 CE, II 3G Ex Na IIA
249122	Hall Effect Cycle Switch for Lincoln UV and Graco Lubriquip®-Manzel MHP series style block					
87617	Reed Type Cycle Switch for Lincoln MC and MC <sup>2</sup> -HP series block					
250001	Wall Mounting Bracket for 87630					
249125	EX Housing, Rated Class 1, Div 1 and 2, Group B, C, D					
250001	Internal 3.6v Lithium Replacement Battery					
250010	Replacement USB Port Cap					



## Model 84501 Program Timer-Solid State

Designed to control the lubrication cycle frequency of air-operated single-stroke pumps. Timer turns pump on/off at programmed intervals via a 3-way or 4-way air solenoid valve (not included) installed in the air line to pump.

Off Time (Cycle Time)		On Time (Pumping Time)		Power Requirement	Approvals	Switch Capacity
Min.	Max.	Min.	Max.			
20 Sec.	24 Hrs.	10 Sec.	1 Min. 24 Sec.	120/230 VAC 50/60 Hz	UL, CSA	120 VAC, 5 Amps 230 VAC, 1.5 Amps



Built-In Program Options		Rating	Enclosure			Ambient Operating Temperature Range	
3 Hr. Program Memory	Prelube Function		Dimensions-in./mm			Minimum	Maximum
Yes / No	Yes / No	NEMA #1	Height	Width	Depth	0°F/18°C	130°F/54°C
Yes / No	Yes / No	NEMA #1	8¼ / 210	6¹³⁄₁₆ / 173	4¹⁵⁄₁₆ / 125	0°F/18°C	130°F/54°C

**Note:** Refer to Technical Manual for a full explanation of available program options.

## Model 84511 Economy Timer for Single Stroke Pumps

Uses a timing motor, cam and Micro-Switch to turn pump off and on. NEMA 1 enclosure, UL and CSA listed. Switch capacity 10 amps non-inductive.



Off Time (Cycle Time)		On Time (Pumping Time)		Power Requirement	Approvals	Switch Capacity
Min.	Max.	Min.	Max.			
5 Min.	1 Hr.	30 Sec.	90 Sec.	120 VAC, 60Hz	UL, CSA	10 Amps

Enclosure			
Rating	Dimensions - in. / mm		
	Height	Width	Depth
NEMA 1	5 / 127	3¼ / 82.5	3½ / 89

**Note:** Off-time selectable in 5 minute intervals.

## Flow Meter

Flow meter measures and records oil flow to the system.



Model	Register	Oil Inlet/Outlet	Max. Pressure Rating psig / bar
87806	200 counts per pint	¼" NPTF(F)	6000 / 408

## Cycle Monitors

Cycle Monitors monitor and record oil flow volume delivered to lube points and signal fault if flow stops or diminishes significantly.



Model	System(s) Monitored	Electrical Power Requirements	Max. Display Record pints	Alarm Time		3rd Party Approvals
				Min.	Max.	
87610	1	115 VAC, 50-60 Hz 24 VDC	999,999	37.5 Sec.	10 Min.	CSA Class I, Group D Class II, Group E, F & G
87611	2					



## Model 84015 Timer-12-24V DC

Solid-state microprocessor-based controller for automated lubrication systems on mobile equipment or where AC power is not available. Rugged construction with liquid- and dust-tight enclosure. Includes manual push-button for remote initiation of a lube cycle.

Off Time** (Cycle Time)		Fixed On Time (Pumping Time)	Power Requirement	Switch Capacity
Min.	Max.			
2.5 Min.	80 Min.	75 Sec.	10-30 VDC 25 MA*	5 Amps

\* Less load.

\*\* Available selections are 2.5, 5, 10, 20, 40 or 80 minutes.

Enclosure				Ambient Operating Temperature Range	
Rating	Dimensions-in. / mm			Minimum	Maximum
	Height	Width	Depth		
NEMA 12	5¼ / 133	3¾ / 79	3 / 76	0°F / -18°C	131°F / 55°C



## Model 85530 Lubrication System Controller

Controls lubrication frequency, master divider valve cycle and monitors supply line pressure. The LCD displays operating status.

Lube Cycle				Max Count Rate*	Pumping Time Before Alarm	
Timer Mode Off Time		Counter Mode Off Counts			Minimum	Maximum
Min.	Max.	Min.	Max.			
1 Minute	99,000 Counts	1 Count	9,900 Minutes	30/Sec. @ 50% Duty Cycle	1 Minute	99 Minutes

\* Minimum duration of count signal is 33 milliseconds.

Power Requirements (less load)		Pump, Solenoid, or Alarm Capacity	Ambient Temperature Range	Enclosure			
Voltage	Current			Rating	Dimensions-in. / mm		
		Height	Width		Depth		
120 VAC, 50/60 Hz	85 MA	360 VA	32° to 122°F -0° to +50° C	NEMA 12	9 ½ 241	8 15/16 227	4 1/8 105
230 VAC, 50/60 HZ	45 MA						
24 VDC	250 MA	5 Amps					

**Notes:** Model 85530 is CSA/NRTL approved.



## Model 85500 System Sentry II

The ultimate automated lubrication system controller/monitor now features greater monitoring accuracy with less sensitivity to lubricant flow rates, feed line length or bearing back-pressure. System Sentry II is always on the job, making sure that every lube point is lubricated when it's supposed to be.

- Solid-state controller with LCD status display and 16-button keypad for system programming
- Controls up to two pumps with as many as two lube zones per pump
- Fully programmable monitoring and alarm functions
- Be set up to monitor every lube point for lubricant flow during each lubrication event
- Easy to understand prompts reported by simple English language messages in real time

**Some functions require optional accessories. See chart on page 30.** Use a maximum of 48 sensors and three accessory Sensor Boards (order separately—16 sensors per board) to monitor lube points.

Lube Cycle				Max Count Rate*	Pumping Time Before Alarm		Net Wt.
Timer Mode Off Time		Counter Mode Off Counts			Minimum	Maximum	
Min.	Max.	Min.	Max.				
1 Second	9,900 Minutes	1 Count	99,000 Counts	30/Sec. @ 50% Duty Cycle	1 Second	99 Minutes	18 lbs. 8.1 kg

\* Minimum duration of count signal is 33 milliseconds.

Power Requirements (less load)		Pump, Solenoid, or Alarm Capacity	Ambient Temperature Range	Enclosure			
Voltage	Current			Rating	Dimensions-in. / mm		
					Height	Width	Depth
120 VAC, 50/60 Hz	250 MA*	360 VA	32° to 122°F 0° to 50° C	NEMA 12	11/241	14/227	4 7/8/105
230 VAC, 50/60 HZ	125 MA*						
24 VDC	600 MA*	5 Amps					

**Note:** Model 85500 is CSA/NRTL approved.

\* No external load, no sensors.

## Model 243100 Sensor wire

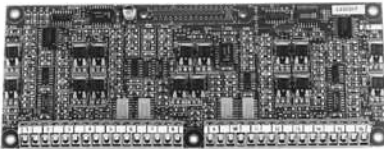
100 foot (30.5 meters) coil of two conductor 22-gauge wire for connecting sensors to monitor. maximum length of wire between sensor and monitor is 500 feet (152 meters).



## Model 247333 Pressure Transducer

Pressure Transducer signals actual system pressure via LCD display of System Sentry II. Comes with 72 inch (1.8m) shielded 24-gauge connecting wire. Maximum length of wire between transducer and monitor is 30 (9.1m) feet.

Range	Accuracy	Proof	Pressure Connection	Ambient Temp.	Input	Voltage Output	Offset	Enclosure
0 to 4000 psi 276 bar	±1%	7500 psig 517 bar	¼" NPT Male Thread	-20° to 180° F -29° to 82° C	10 to 30 VDC	1-6 VDC	1 VDC	NEMA 4X Rating 300 Series Stainless Steel



## Model 250365 Sensor Board

Plug-in accessory board used with Model 85500 that allows the attachment of up to 16 lube flow sensors. Model 85500 comes without boards installed and can hold up to a total of three.



## Sensor Assemblies

Sensor assemblies consist of a check body and lube sensor with attached 30' cable. Cables are epoxy potted into the sensors for a watertight seal. Sensors have a 3/8" pipe thread for conduit connection and a Viton® O-ring seal. Check bodies terminate in a 1/8" NPTF male thread for attachment to a bearing or other lubricant inlet. Maximum working pressure 6,000 psi (414 bar). Maximum wire run from sensor to monitor is 500 feet (152m).



Model	Description	Construction	Lubricant Temp. Range	Min. Flow Per Event	Min. Interval Between Lube Flow Event
250400	Straight Sensor Assembly	Brass Sensor & Plated Steel Check Body	32° to 145° F 0° to 63° C	.008 cu. in./131cc @ 126°F/53°C to 145°F/63°C	30 Seconds
250490	90° Sensor Assembly				
250500	Straight Sensor Assembly	316 Stainless Steel Sensor & Check Body	32° to 145° F 0° to 63° C	.008 in <sup>3</sup> /.131cc @ 126°F/53°C to 145°F/63°C	
250590	90° Sensor Assembly				

## Use This Guide to Select Accessories for Model 85500 System Sentry II



Function	Pressure Switch #69630	Sensor Board #250365	Sensors Note 2	Sensor Wire #243100 (100') Note 3
Lube Controller 1 Pump, 1 Zone <b>Note 1</b>	Optional 1	-	-	-
Lube Controller, 1 Pump, Up to 3 Zones	Optional 1	-	-	-
Lube Controller, 2 Pumps, 1 Zone Per Pump	Optional 1	-	-	-
Lube Controller, 2 Pumps, Up to 2 Zones Per Pump	Optional 1	-	-	-
Lube Point Monitoring ≤ 48 Points	-	Required 1 per each 16 Sensors	Required 1 per Lube Point	Required Quantity As Needed

**Note 1:** Controller may be operated without a pressure switch. Pressure switch may be used to monitor supply line pressure.

**Note 2:** Sensors include 30' (9.1m) cable pigtail. Select brass/plated steel or stainless steel sensors in straight or 90° configuration as required.

**Note 3:** Maximum distance between monitor and sensor is 500' (152 meters).



## Electric Solenoid-Operated Air Valves

Model	Type	Electrical Characteristics			Air Inlet/Outlet	Ambient Temperature Range	Cv Factor	Max. Pressure psi / bar	Conduit Connection
		Power Requirements	Inrush Current Amps	Holding Current Amps					
350244	4-Way	110 VAC, 50 Hz 120 VAC, 60 Hz 8.4 VA	.11	.07	1/4" NPT(F)	0° to 120°F -18° to 49°C	1.2	150 / 10.3	1/2" NPS(F)
350245		220 VAC, 50 Hz 240 VAC, 60 Hz 8.4 VA	.055	.035					
350241	3-Way	110 VAC, 50 Hz 120 VAC, 60 Hz 8.4 VA	.11	.07	1/8" NPT(F)	0° to 140°F -18° to 60°C	.18	150 / 10.3	N/A
350242		220 VAC, 50 Hz 240 VAC, 60 Hz 8.4 VA	.055	.035					
350282		12 VDC 6 Watts	N/A	N/A					
350283		24 VDC 6 Watts	N/A	N/A					
68586	2-Way	120V, 60 Hz 12 VA	.2	.1	3/8" NPT(F)	0° to 120°F -18° to 49°C	2.4	150 / 10.3	1/2" NPT(F)
274398	3-Way	24 VDC 8.5 Watts	N/A	N/A	1/4" NPT(F)		.5		N/A
244727		110 VAC, 50 Hz 120 VAC, 60 Hz 11 VA	.12	.09	3/8" NPT(F)		4.4		1/2" NPT(F)



## Model 83354 Signal Monitor

Designed to provide visual and audible indication of system operation and failure. Utilizes signal from system controller. Includes model 69606 Alarm Horn mounted on enclosure door.

Power Requirement	Indicator Lamps			Audible Alarm	Dimensions - in / mm		
	Power On	Lube System On	System Failure		Height	Width	Depth
115 VAC 50/60 Hz 35 VA	Green	Amber	Red	69606 Horn (Included)	10 / 254	8 / 203	6 / 152