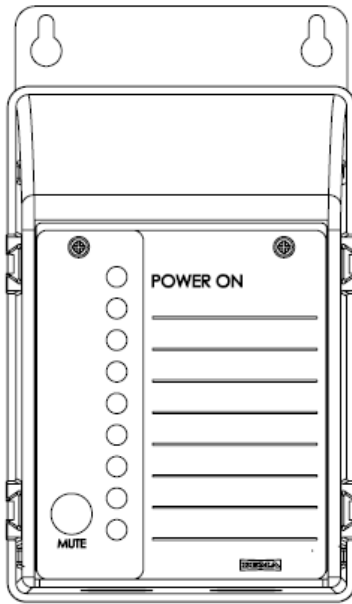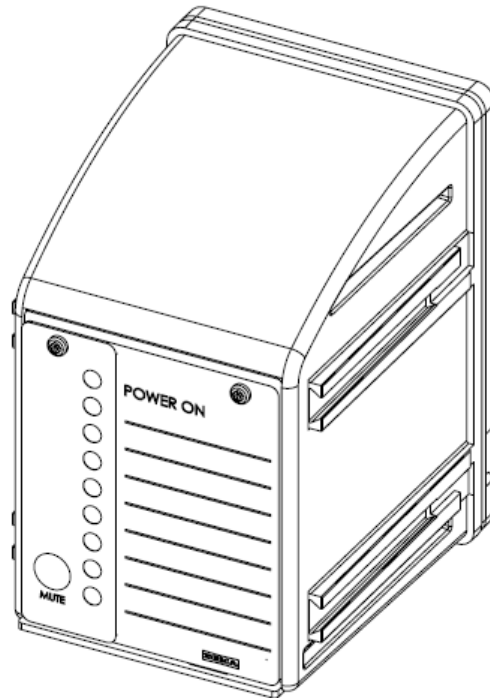# LOW LEVEL ALARM

84.65.48 STAND ALONE

84.65.49 ATLAS ADD-ON

Overview

The DEMA Low Level Alarm is an accessory to add to your existing installation. It can be installed as a stand alone unit or an add-on item to the DEMA Atlas Laundry System. It has inputs for up to 8 products and can use either the DEMA Low Level Capacitive Sensor or any other sensor with a 2-wire connection (such as a float switch). It also has an audible alarm with a mute button on the front of the unit.

Warnings

Installation of DEMA products must meet all applicable electrical codes and regulations established by national, city, county, parish, provincial or other agencies. It is possible that electrical codes and regulations require that a certified electrical contractor or engineer perform the electrical installation. For questions, contact a certified electrician.

ALL ELECTRICAL POWER MUST BE TURNED OFF TO THE DISPENSER AND TO THE APPLIED MACHINE.

All installations must conform to local plumbing codes and use approved backflow prevention devices. A pressure indicating tee is to be installed with existing faucets according to local plumbing codes in the state of Wisconsin and any other state that requires the use of a pressure indicating tee.

ALWAYS WEAR PROTECTIVE CLOTHING AND EYEWEAR WHEN WORKING WITH CHEMICAL PRODUCTS.

Specifications

Packing List

PARTS	84.65.48 STAND ALONE	84.65.49 ATLAS ADD-ON
LOW LEVEL CONTROL	81.340.1	81.340.2
SWITCHING POWER SUPPLY	1	--
POWER CORD TO ATLAS	--	1
INSTALL KIT	84.17.10	84.17.11
84.176.3 STRAIN RELIEF	2	2
81.144.1 SIDE MODULE JOINT	--	2
I1027 INST. SHEET	1	1
81.32.54 GROUND WIRE	1	--

LOW LEVEL SENSOR KITS (NOT INCLUDED W/ UNIT)

| KIT NO.	SENSOR TYPE
84.65.44	CAPACITIVE SENSOR W/ BARBS FOR **3/8" ID TUBING**
84.65.45	CAPACITIVE SENSOR W/ 3/8" QUICK CONNECT UNION FITTINGS FOR **3/8" OD TUBING**
84.65.46	CAPACITIVE SENSOR W/ ¼" X 3/8" QUICK CONNECT UNION FITTINGS FOR **1/4" OD TUBING**
84.65.47	CAPACITIVE SENSOR W/ 3/8" QUICK CONNECT STEMS (3/8" QUICK CONNECT FITTINGS NEEDED TO CONNECT HOSE **NOT INCLUDED**)
82.29.3	15' EXTENSION CABLE

Operational Requirements

	84.65.48	84.65.49
VOLTAGE	120/240 VAC 50-60 HZ	12 VDC
CURRENT	UP TO 1 AMP	

Overall Size & Weight
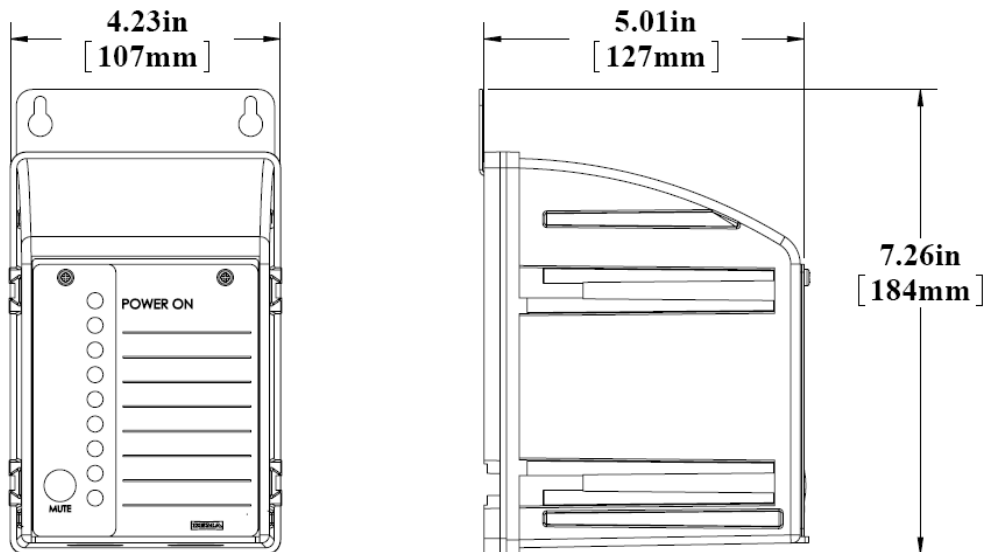
Parts List
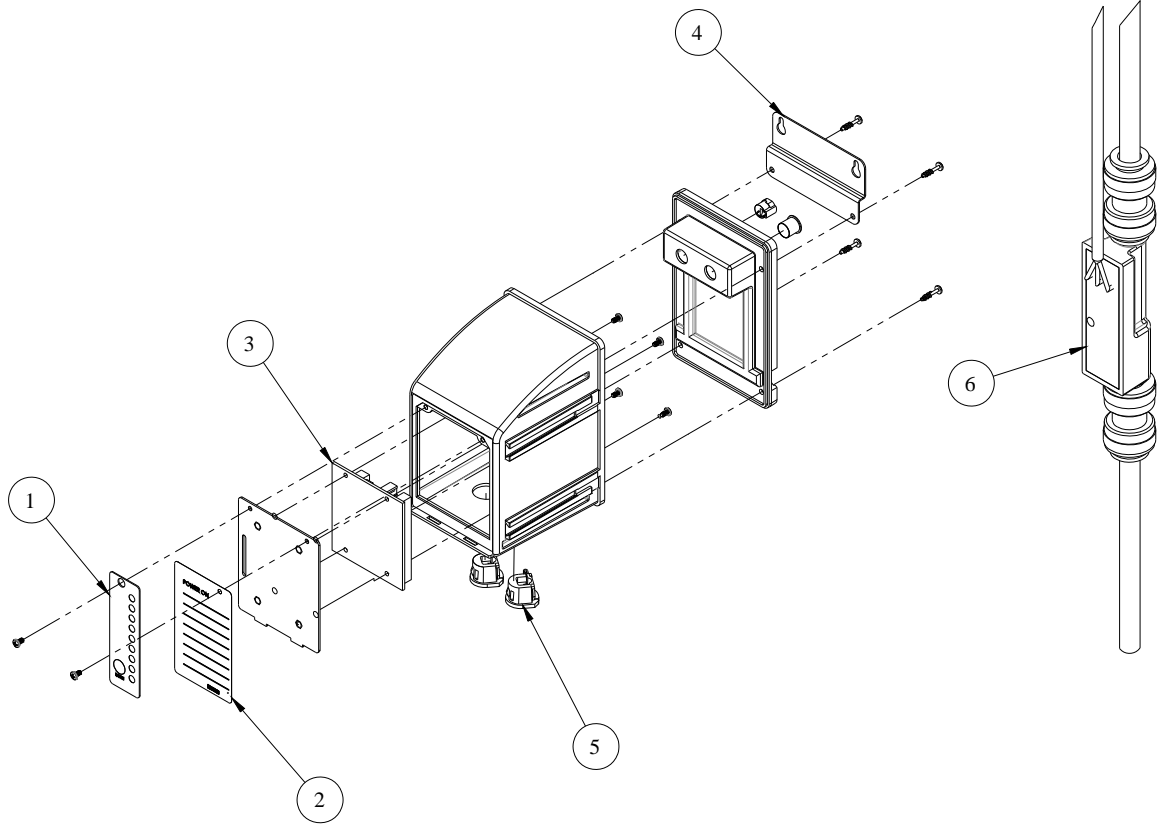
| NO.	PART NO.	DESCRIPTION
1	L1187	MEMBRANE LABEL WITH MUTE BUTTON
2	L1239	CHEMICAL LABEL
3	84.65.50	CONTROL BOARD KIT
4	81.324.1	WALL MOUNTING BRACKET
5	84.176.3	STRAIN RELIEF FOR SENSORS
6 (Not Included)	84.65.44	SENSOR W/ BARBS **FOR 3/8" ID TUBING**
	84.65.45	SENSOR W/ **3/8" QUICK CONNECT UNION FITTINGS (SHOWN)**
	84.65.46	SENSOR W/ **¼" QUICK CONNECT UNION FITTINGS**
	84.65.47	SENSOR W/ **3/8" STEM (NO FITTING)**
7	25.69.8	SWITCHING POWER SUPPLY FOR STAND ALONE UNIT **(NOT SHOWN)**
	81.78.1	POWER CABLE FOR CONNECTION TO IQ-85 **(NOT SHOWN)**
8	82.29.3	15' EXTENSION CABLE FOR SENSOR LENGTH **(NOT SHOWN)**
9	81.32.54	GROUND WIRE FOR STAND ALONE UNIT **(NOT SHOWN)**

Installation

Mounting

84.65.48-Low Level Stand Alone Unit

A wall mounting bracket is included on the unit. Find a place to mount the unit so that the wires for the sensors will reach the necessary chemical lines going to the dispenser. Use the proper hardware to mount the dispenser to the wall.

84.65.49-Low Level Atlas Add-on Unit

Mount this unit to the end of an Atlas using dovetail joints (81.144.1) included in the assembly (see picture).

DOVETAIL JOINT WITH SNAP UP

DOVETAIL JOINT WITH SNAP DOWN
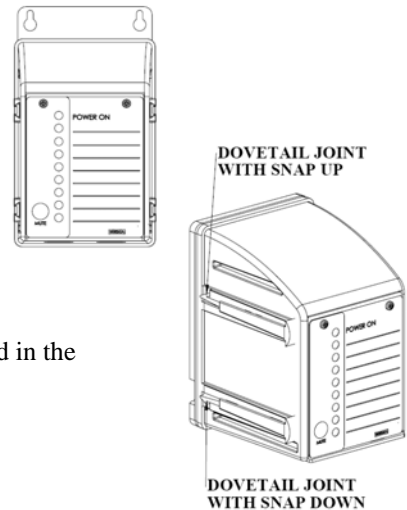
Electrical Installation

84.65.48-Low Level Stand Alone Unit

The stand alone unit is equipped with a standard switching power supply that can be plugged into 120 or 240 VAC 50 or 60 Hz.

Included in the installation kit of the unit is a ground wire. The ground wire helps with electrical noise in industrial environments. If an installation has problems with the sensors working properly, then install this ground wire on the first screw terminal input on the low level board and ground the wire to any common grounding point in the installation.

GROUND WIRE CONNECTION
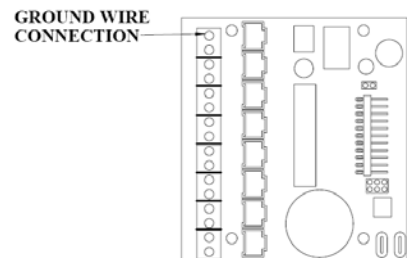
84.65.49-Low Level Atlas Add-on

The Atlas add-on unit is equipped with a power cable that should be wired into the Atlas Laundry System on the IQ-85 Control Board. The hardware revision will determine how the Low Level will be added to the unit. This can be determined by looking for the revision letter near where the main power comes into the unit. It should be below the terminal block row for the pumps.

For Control Boards Revision B or earlier, there is a screw terminal block in the upper left corner of the board with 4 places. The wires should be installed as shown in the picture in **FIGURE 1.** The wire with a white stripe (Hot) should be wired into the first screw terminal. The plain black wire (Return) should be wired into the last screw terminal in the 4 screw terminal block.
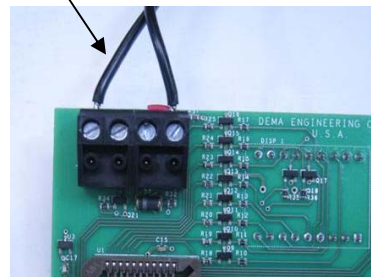
White Stripe

Figure 1: Rev. B or older IQ-85

For Control Boards Revision C or newer), there is a screw terminal block with 6 places. The last two places as shown in **FIGURE 2** are reserved for 12 VDC out of the control board. This is what is needed to power the unit. The wire with the white stripe (Hot) should be wired into the 5th screw terminal. The plain black wire (Return) should be wired into the last screw terminal.
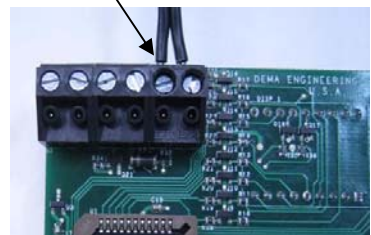
White Stripe

Figure 2: Rev C or newer IQ-85

Alarm Configuration

Mute Jumper: The mute jumper is placed on both pins in order to permanently mute the audible and auxiliary alarms (if connected). If the audible alarm is desired, the mute jumper must be moved to only cover one of the two pins or removed entirely.

Auxiliary Port: An auxiliary port is available for driving external alarms that are rated at 12 VDC. The maximum current capacity is .200 Amps.
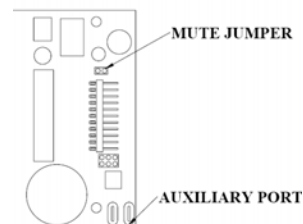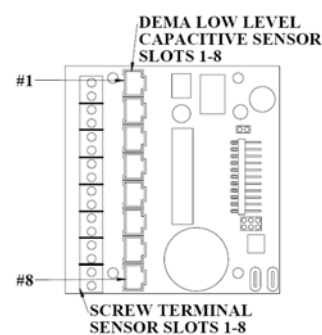
Sensor Installation

The sensors for the unit should be installed by removing the four screws on the front of the unit. This will give access to the control board for the unit. Run the sensor wire through one of the two large holes in the bottom of the enclosure and place the wire in the proper space on the board.

On the front panel of the enclosure, the label is provided to write the chemical name of each sensor input into the control board. **Apply power to the control before connecting the sensors to the tubing**. This will help determine if the sensors are installed properly. Without any chemical in the sensors, each alarm should activate for each sensor installed to the board. Remove power from the unit.

Use the strain reliefs (84.176.3) in the kit of the unit to secure the sensor wires in the bottom of the enclosure. Leave enough cord in the enclosure so that the front panel can be removed. Replace the front panel on the unit and insert the screws in the proper holes. The screw terminal can be used with normally open float valves.

For more information on installing the sensors, see instruction sheet I1028.

Labeling

The front label of the unit has space provided to mark the chemical which each sensor is associated with. The lines and LEDs correspond to the inputs on the control board as shown in the picture.

The sensor, which is in the #1 input, corresponds to the first blank line on the front of the unit. This is where the chemical name or information should be put to help to quickly find which chemical is empty.
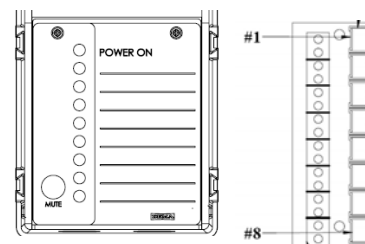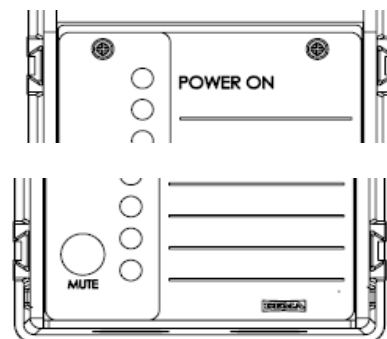
Operation

Normal Operation - Once the front cover is installed and the unit is powered, the control will begin sensing the chemical in the tube. The **"POWER ON"** LED (Green) will be lit as long as the unit has power. As long as there is chemical in the tube, the LED lights will not be lit.

Sensor Alarm (Out of Product) - When a chemical is not present, the LED will light red and the audible alarm will be active. At this time the **"MUTE"** button may be pushed to silence the alarm. The mute will last for 5 minutes.

Features - The Low Level Alarm has an automatic 3 second buffer built into the control which will eliminate unnecessary alarms due to air bubbles in the supply tubing.

Troubleshooting

PROBLEM	CAUSE	SOLUTION
It doesn't turn on.	1. Not Plugged in/Wired incorrectly 2. Power cord not plugged into board.	1. Plug the unit into the wall or Atlas Laundry System 2. Remove screws from the front of the unit. Check to see if the power cord is properly installed.
The sensor is alarming and there is chemical in the line	1. The sensor may not have had time to switch over to an "off" state 2. The sensor may be faulty.	1. Wait for the 3 second delay. If this does not work. Cycle power to the unit to see if this clears the condition. 2. Replace the sensor.
The sensor is not alarming and there is no chemical in the line	1. The sensor may not have had time to switch over to an "off" state 2. The sensor may be faulty.	1. Wait for the 3 second delay. If this does not work. Cycle power to the unit to see if this clears the condition. 2. Replace the sensor

Warranty

Merchandise Returns

No Merchandise will be returned for credit without DEMA'S written permission. Returned merchandise authorization number is required in advance of return.

Product Warranty

DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products that have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "O"-rings, diaphragms, PVC tubing, and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty is void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. DEMA assumes no liability for damages. Return merchandise authorization number must be granted in advance of returned units for repair or replacement (See "Merchandise Returns" above).