

ATS-300 PLUS

Automatic Transfer System / Multiple Air Dryer Controller And Monitoring System

Installation and Operation Instructions

Models ATS-300 PLUS IB-422 Rev. D P/N 93620



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Section 1 - Preface

Before you begin

Thank you for your interest in Dielectric's ATS300PLUS Automatic Transfer System / Multiple Air Dryer Controller and Monitoring System.

Please read this user manual in its entirety before attempting to use the ATS300PLUS system.

Dielectric products, including this manual, are under continuous development. The information contained within is accurate at time of publication; however the ATS300PLUS, this manual and all its contents are subject to change.

Dielectric reserves the right to modify the product without notice and some product changes may have taken place after this user manual was published.

Contact your local Dielectric dealer or visit www.radiodetection.com/dielectric for the latest information about the ATS300PLUS, including this manual, and the rest of the Dielectric range of products designed for dry air pressurization applications.

1.1 Important notices

General

This instrument, or family of instruments, will not be permanently damaged by reasonable electrostatic discharge and has been tested in accordance with IEC 801-2. However, in extreme cases temporary malfunction may occur. If this happens, switch off, wait and switch on again. If the instrument still malfunctions, disconnect the power supply for a few seconds before restarting.

Safety

 **WARNING!** Failure to comply with safety warnings can cause serious injury or death

CAUTION!: Failure to comply with safety cautions can result in damage to equipment or property

This equipment shall be used only by qualified and trained personnel, and only after fully reading this Operation Manual.

 **WARNING!** Direct connection to live conductors is **POTENTIALLY LETHAL**. Direct connections to live conductors should be attempted by fully qualified personnel only using the relevant products that allow connections to energized lines.

1.2 Intellectual property

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Section 2 - Introduction

2.1 About this manual

This manual provides air pressurization professionals with comprehensive operating instructions for the ATS-300 PLUS system. Before operating the ATS-300 PLUS system it is very important that you read this manual, noting all safety warnings and procedures.

2.2 About the ATS300Plus

The Dielectric ATS300Plus is a state of the art Automatic Transfer System and Multiple Dryer Controller. The ATS300PLUS is designed to automatically cycle compressor/dehydrators and to start-up the stand-by dryer(s) in the event an alarm occurs with the on-line dryer(s).

Remote monitoring, programming, alarm resetting and air dryer restarting is available using PC with Modem and/or Ethernet with "WinCAM 3.xx" software. An Alphanumeric Paging or Email feature can alert the technician should a Minor or Major ATS alarm occurs.

2.3 Manual outline

Section 1 includes an overview of safety procedures and notices. Review them before moving on to Section 2 and the rest of this manual

Section 3 provides an overview of the ATS300PLUS system

Section 4 covers installation of the ATS300PLUS

Section 5 details powering the system up

Section 6 introduces programming the system

Section 7 provides information on the setting of alarms

Section 8 includes Out of Service and Manual control

Section 9 covers the ATS300PLUS display

Section 10 is a technical review of the ATS300PLUS

Section 11 provides details on Dielectric's ATS WinCAM software

Section 12 introduces the security system

Section 13 covers set up of analog sensors

Section 14 covers alarm monitor Pager/Email setup

Section 15 introduces the Options Setup Window

Section 16 provides LAN Ethernet Card setup information

Section 17 is a Central office events glossary

Section 18 has spare part and ordering menu information

Section 19 covers upgrading the controller

2.4 Safety

Read this manual in its entirety before attempting to operate the ATS300Plus. Note all safety notices in the preface and throughout this manual

Follow your company and national safety procedures and or requirements when operating this equipment in any environment or workplace. If you are unsure what policies or procedures apply, contact your company or site's occupational health and safety officer or your local government for more information.

Do not use this equipment if you suspect that any component or accessory is damaged or faulty.

Use authorized accessories only. Incompatible accessories may damage the equipment or give inaccurate readings.

Keep this equipment clean and arrange for regular services with an authorized Radiodetection service center. More information can be found in the Appendix or from your local Radiodetection representative.

Do not attempt to open or dismantle any part of this equipment unless directed specifically by this manual. Doing so may render the equipment faulty and may void the manufacturer's warranty.

2.5 Training

Dielectric provides training services for most Dielectric products. Our qualified instructors will train equipment operators or other personnel at your preferred location or at Radiodetection headquarters.

For more information go to www.radiodetection.com/dielectric or contact your local Radiodetection representative.

Section 3 - System Overview

3.1 Introduction

The Dielectric ATS300PLUS is a state of the art Automatic Transfer System and Multiple Dryer Controller. The ATS300PLUS is designed to automatically cycle compressor/dehydrators and to start-up the stand-by dryer(s) in the event an alarm occurs with the on-line dryer(s). Remote monitoring, programming, alarm resetting and air dryer restarting is available using PC with Modem and/or Ethernet with "WinCAM 3.xx" software. An Alphanumeric Paging or Email feature can alert the technician should a Minor or Major ATS alarm occur.

The ATS300PLUS operates multiple day rotations and can provide for the automatic rotation of duty among predetermined groups of air dryer units in a central office with up to 8 air dryer units. The ATS300PLUS will allow key personnel to access any central office from a remotely located PC/modem (password and dedicated phone line required) or via LAN. The user can access the status of the office, individual air dryer information, remote optional analog sensors (up to four may be added), check alarms, run time accumulation and maintain a rolling history of major central office events. The user can remotely reset alarms, restart dryers and restore air dryers to normal without leaving their home or work center. Also a Local connection through a computer is possible using the USB port, a standard USB Type A to Type B cable (provided), and WinCam 3.xx software.

The savings in electrical energy associated with only operating the necessary number of air dryer units in a major central office will alone pay for the ATS300PLUS. Further cost savings can be obtained from being able to remotely reset air dryer units, rather than dispatching a technician to reset every air dryer alarm. In addition the use of a single pair for controlling and monitoring the air dryer units is another significant saving.



3.2 Alternating Mode

The two available operational modes are [AUTO-ROTATION MODE](#) and [ROW ROSTER MODE](#). The AUTO-ROTATION MODE will be preferred in most normal cases. If the air dryer units are relatively similar, i.e., same model, flow output, and nearly same age, then AUTO-ROTATION MODE should be selected. ROW ROSTER MODE should only be considered if special cycling considerations are required. Using ROW ROSTER MODE, selected units may be scheduled for more run time than others, and groups of similar units can be operated together or mixed. ROW ROSTER MODE provides greater flexibility and is very useful for central offices with up to 8 air dryer units or where the dryers are of mixed size and manufacturer.

3.3 Standby Only Mode

In applications where it is desirable to only operate one air dryer unit and maintain the other on standby, it is recommended to use the AUTO-ROTATION MODE but select no day for transfer.

3.4 Automatic / Manual Transfer

The ATS300PLUS will automatically transfer to the stand-by air dryer as programmed in the AUTO-ROTATION MODE or the ROW ROSTER MODE. The transfer clock determines exact transfer time. Pushing both the Select buttons at once and holding for 10 seconds can execute a Manual transfer.

3.5 Pre-Installation Considerations

It is important to install an AC 115V outlet within 6' of where the ATS300PLUS is to be mounted. The ATS300PLUS Controller unit can be wall mounted or rack mounted at least 25' from the closest air dryer unit. For the COMMUNICATION MODEM, a dedicated analog telephone line is necessary for remote monitoring and call-up features. The ATS300PLUS utilizes an addressable address for each air dryer unit, and it is therefore not necessary to install the controller unit near air dryer #1.

For the Ethernet LAN Communication, a nearby RJ45 Jack is required and a LAN Cable. Refer to the manual for the LAN/Communication Card for installation and setup.

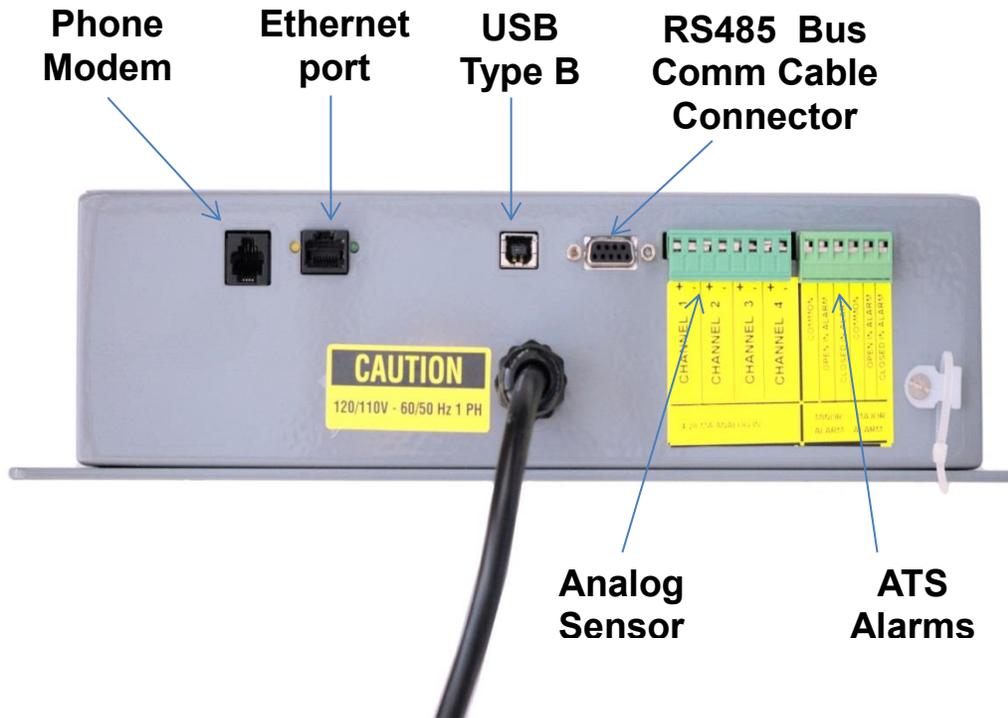
NOTE: To avoid nuisance ATS300PLUS alarms during back-up generator testing, the 120 VAC Power Source for the ATS300PLUS MUST be on generator power (essential power).

Compatible analog sensors must be a 4-20mA 2 wire output encompassing an input voltage supply of 12V DC or Lower.

 **WARNING:** Operating the ATS300PLUS from a stand-alone "U.P.S.", (Uninterruptable Power Supply) is now allowable as long as the segregated cable (non SmartTech Series Dryers) is used and each Dryer Model is defined in WinCam's Dryer Setup Window

Section 4 - INSTALLATION

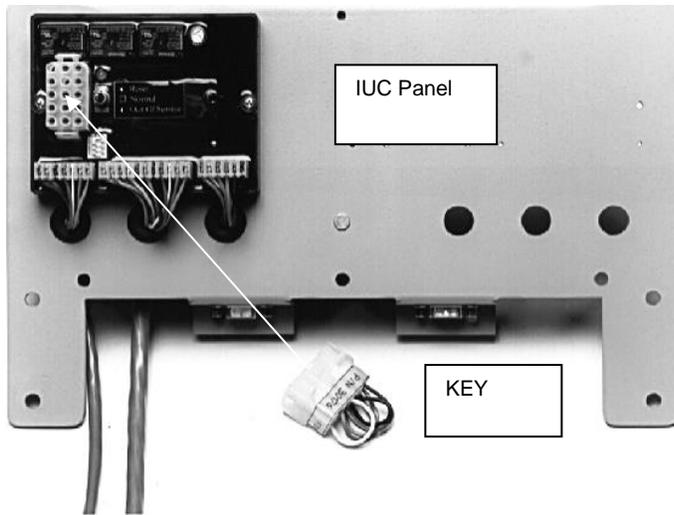
4.1 ATS300PLUS Connections



An ATS300PLUS installation consists of the following:

1. Wall Mounted Controller unit.
2. IUC (Individual Unit Controllers) - one per air dryer (already built into SmartTech Air Dryer series circuitry). Other Manufacturers' Dryers will used either an ATS304 or ATS305 Interface
3. Proper KEY (Used on IUC Panels on older Dielectric High Capacity Dryers only)
4. Bus Cables - one per air dryer / daisy changed to each air dryer unit.
5. Labels for Air Dryers (A1 through A8)
6. Telephone Line
7. Network Connection / LAN Cable

⚠ WARNING: It is very important to use the correct "KEY" for the type of Dielectric Air dryer that you are using or damage will result!

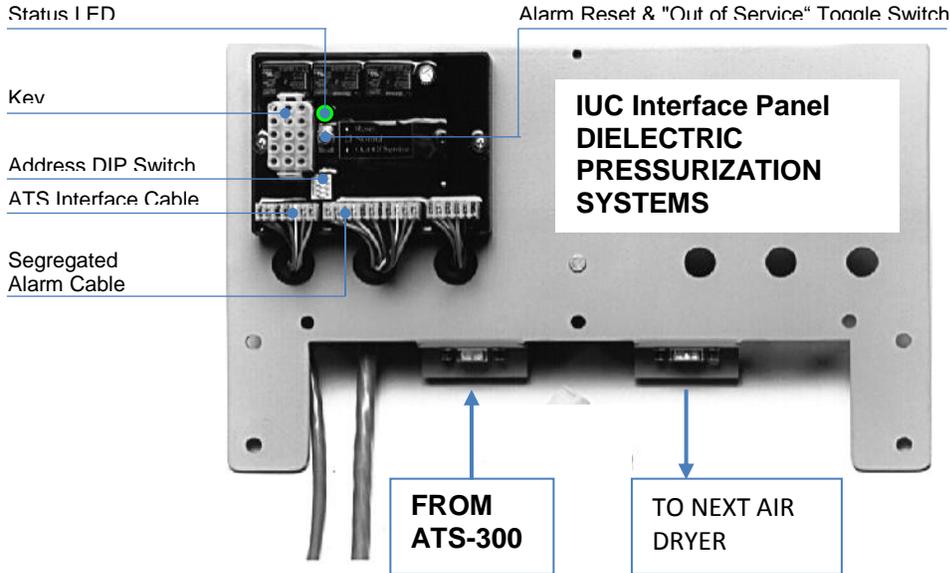


4.2 DIELECTRIC WATER-SEALED AIR DRYER Model S, SE, M, and ME series

STEP 1 - Mount the ATS300PLUS CONTROLLER UNIT on wall or rack, within the cable distance of an air dryer unit. See Installation Drawings.

STEP 2 - Mount the IUC PANELS to the rear of the air dryer units. Brackets are designed to “Hang” on the rear of the model 20000/30000SE air dryer. Models 5000/10000/15000SE/ME air dryers have accommodating pre-drilled holes at the rear of unit. Other units may require drilling holes. It may be desirable to mount on wall near dryers.

STEP 3 - Connect ATS300PLUS to the nearest air dryer unit using the supplied cable. Then daisy chain each air dryer unit using the other BUS cables. Run the bus cable to the first IUC and connect it to the mating D-connector. Connect the end of the next cable to the connector of opposite gender on the IUC and run this cable to the next air dryer unit IUC. Each air dryer unit IUC is individually addressed. It does not matter in which order the 8 air dryer unit IUCs are connected.

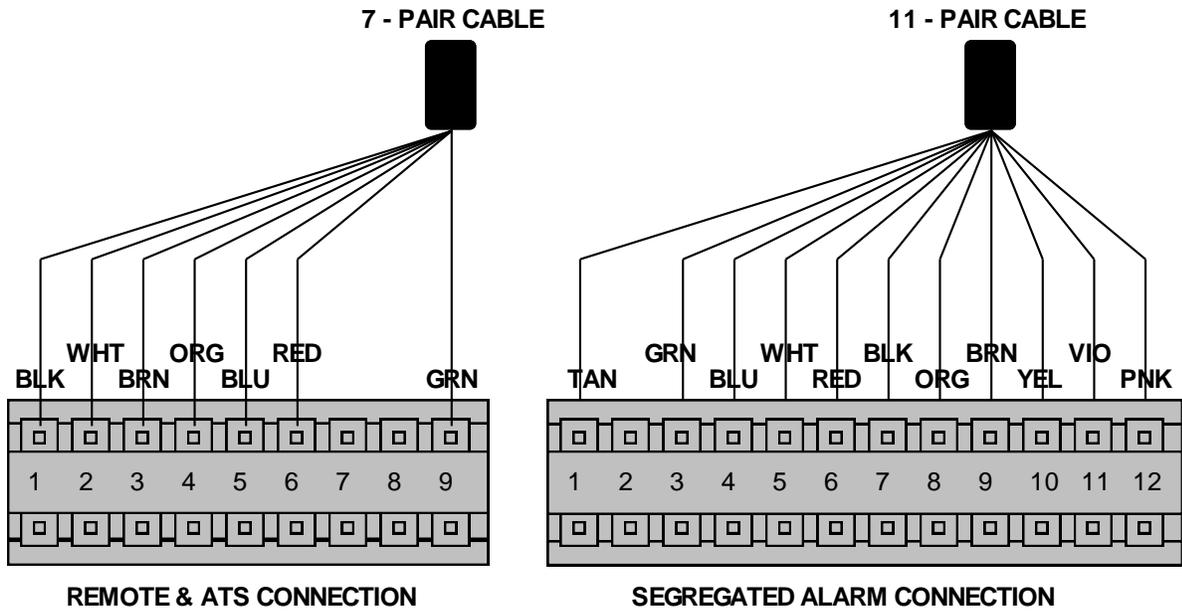


STEP 4 - [Install the two- \(2\) wiring harnesses](#), i.e., **ATS INTERFACE and **SEGREGATED ALARMS**.** In most cases the 7-wire cable must be connected to the ATS-INTERFACE terminal board located on the air dryer. This cable must be connected in accordance with the indicated color code on the terminal board label. This cable may be trimmed to desired length prior to installation.

Other manufacturer's air dryers can be adapted by designating a wire for each alarm (up to 10 wires). The alarm can be identified and named in the WinCam software. Other manufacturer's dryer applications will require an ATS-304 or ATS-305 INTERFACE KIT to be mounted on the wall between the CONTROLLER and air dryer. Refer to Page 16 for Installation Procedures.

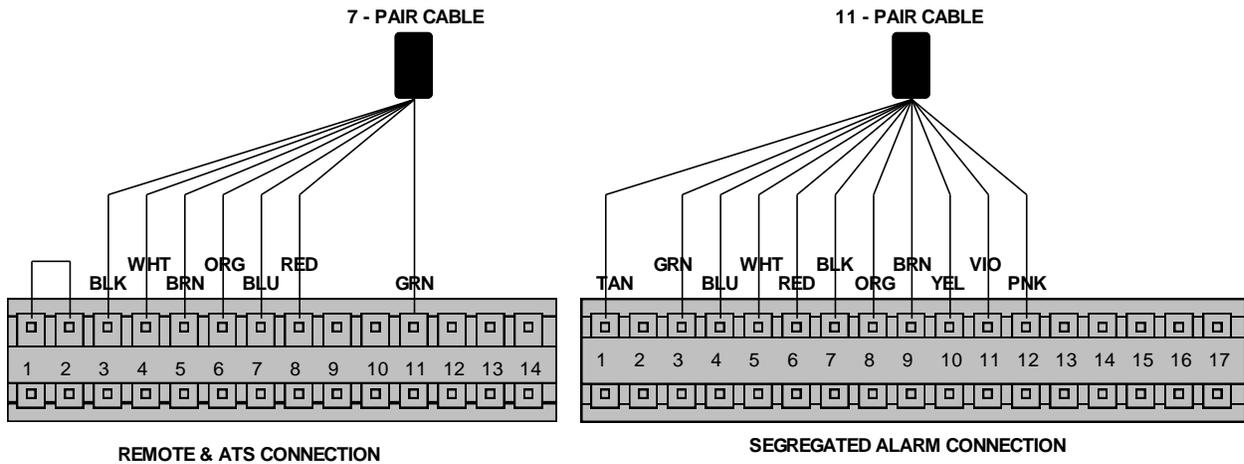
SEGREGATED ALARM HARNESS (Color Codes)	
Alarm Common	Tan
Power Failure	Green
Alarm #2	Blue
Alarm #3	White
Alarm #4	Red
Alarm #5	Black
Alarm #6	Orange
Alarm #7	Brown
Alarm #8	Yellow
Alarm #9	Violet
Alarm #10	Pink

Terminal block hook-up - SE/ME series air dryers



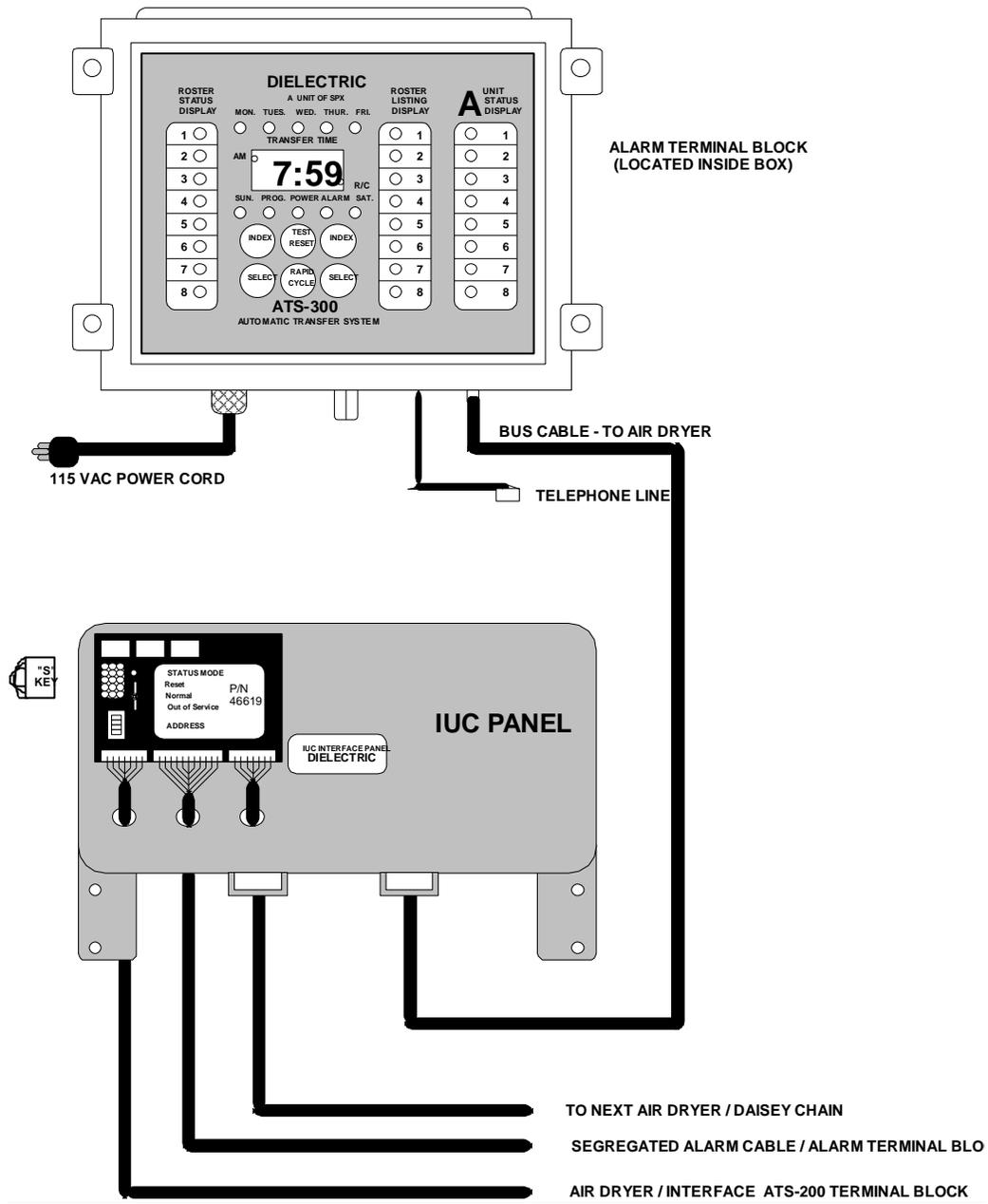
NOTE: Remove Black Jumper from #1 and #2.

Terminal block hook-up - S/M series air dryers



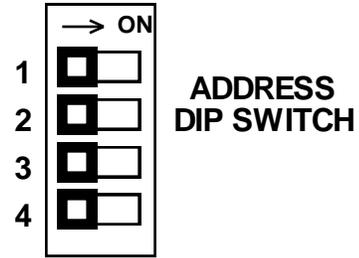
NOTE: Remove Black Jumper from #3 and #4.

Dielectric Installation - S/SE/M/ME series air dryers



STEP 5 - Identify each air dryer unit, i.e., A1, A2, A3 etc. and properly address and label each unit using the chart below and the DIP switches located on the IUCs.

It is important to indicate the last air dryer unit and terminate the address by switching #4 on the DIP SWITCH to ON. Switch #4 on all other air dryer unit IUC's must be OFF. Switch #4 indicates to the ATS300PLUS the last air dryer on the bus cable.

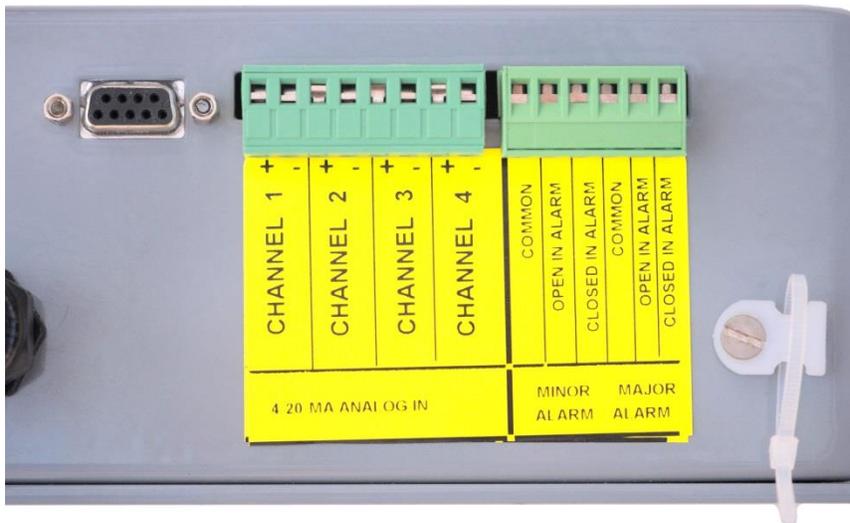


Example: This is set for dryer unit one (1)

DIP SWITCH SETTING			
Air Dryer / IUC ADDRESS	Switch #1	Switch #2	Switch #3
1	off	off	off
2	ON	off	off
3	off	ON	off
4	ON	ON	off
5	off	off	ON
6	ON	off	ON
7	off	ON	ON
8	ON	ON	ON

NOTE: Switch #4 must be set to OFF on all air dryer unit IUC's except the last IUC on the cable. This IUC must have Switch #4 set ON, to terminate the RS485 bus.

OPTIONAL STEP 6 - Hook-up the remote/monitoring alarm pairs to the **MINOR** and **MAJOR** alarm outputs of the ATS300PLUS alarm connector. Remove the Plug-In Screw Connector, strip back wire ends and attach wires per the Label. Choose "Open in Alarm" or "Closed in Alarm" and program the monitoring system accordingly. Route the cable through the strain relief tie wrap and secure. A MINOR ATS alarm will occur if one-air dryer unit experiences a MINOR or MAJOR alarm. The MAJOR alarm will occur only if all air dryers SHUTDOWN or a BAD ROSTER is noticed (i.e., inadequate number of back-up air dryers are noticed). If the optional sensors are used, a Minor or Major ATS alarm will occur independent if setup in WinCam3.xx



STEP 7 – Hook-up the optional analog sensors to the 4-20mA Analog Connector. Up to four sensors may be connected. Two wire sensors are marked with a “+” and “-” “Remove the Plug-In Screw Connector, strip back wire ends and attach wires per the Label observing the polarity

STEP 8 - Apply power (115VAC) to the ATSS300PLUS CONTROLLER.

NOTE: There is a one (1) minute power-on delay

INSTALLING ATSS-304/ATSS-305 INTERFACE PANEL – For Models IM2400/3200/5000/7200 and other manufacturer’s Air Dryers (See Installation Drawing)

STEP 1 - Mount the ATSS-304 or ATSS-305 INTERFACE PANEL on wall or rack, within the cable distance of an air dryer unit. Using the enclosure, mark the mounting screw locations and drill four holes. Hole size will depend on the type of hardware used. Clearance in the box accommodates 1/4” hardware.

STEP 2 - Disconnect the air dryer power cable from the power source. Route the cable from the air dryer to the strain relief clamp (top right) on the ATSS-304/305 panel and feed the cable through the clamp. **NOTE** The ATSS304 (120VAC version) has Pigtail cables with Male and Female 120 Power connectors. No wiring is required. Skip to Step 6 for Alarm Cable wiring.

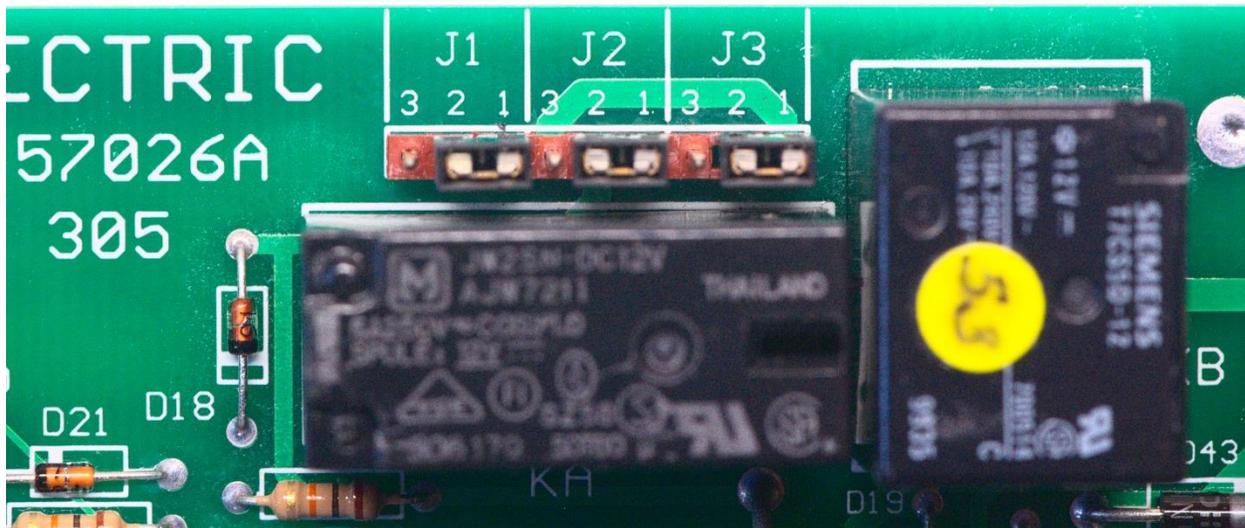
STEP 3 - Connect wires labeled T1, T2, and T3 (for 3-phase units) directly on the CONTACTOR from the bottom terminal up. Note that the top terminal (T3) is not used if connecting to a single-phase unit. Connect the ground wire to the grounding lug located below the CONTACTOR.

STEP 4 - Route an input power cable to the top left strain relief clamp on the panel and through the clamp.

STEP 5 - Connect wires L1, L2, and L3 if applicable) directly onto the CONTACTOR from the bottom terminal up. The top terminal is not used if connecting to a single-phase unit. Connect the ground wire to the grounding lug located below the CONTACTOR.

STEP 6 - Route a cable from the air dryer segregated alarm terminal board through the strain relief clamp (left bottom) on the interface panel. If segregated or discrete alarms are connected to the monitoring system, rewire monitoring system alarm contacts into the ATS-304/305 ALARM OUTPUT in step 10 if necessary. At the alarm segregated terminal board, configure wiring for a single common wire and individual wires for up to 10 different alarms.

STEP 7 - At the interface panel, locate the Input terminal board and verify the alarm logic (open or closed in alarm) of the air dryer alarms. If unknown, verify with an Ohmmeter prior to connecting. A short circuit when in Alarm is defined as "Closed in Alarm ". Connect the common wire to the first terminal marked "COM" and the individual alarm wires to POWER FAILURE, ALM2, etc. up to ALM10. If there is no Power Failure Alarm input, leave blank and wire to ALM2 first. Factory Default, Jumpers J1, J2 and J3 are configured for Closed in Alarm inputs on pins 1 and 2 (all jumpers are located to the right of the center pin)



STEP 8 - If the air dryer alarms are Open in Alarm, then all unconnected alarms including the Power Failure alarm (if not used) must be looped to the COM terminal located above ALM10. Loop from COM to ALM10, ALM10 to ALM9, ALM9 to ALM8, and so forth. Also there are three alarm jumps, J1, J2, and J3 that must be configured based on the Alarm Logic. For Open in Alarm circuits, install jumper connectors on J1, J2 and J3 on pins 2 and 3 (jumpers are moved to the left of the center pin)

STEP 9- Connect to the OUTPUT Segregated Alarm terminal board. Regardless of how the Alarm Inputs are configured, For "Closed in Alarm " wire to the "COM" and "NC" terminals, for "Open in Alarm" wire to "COM" and "NO" terminals

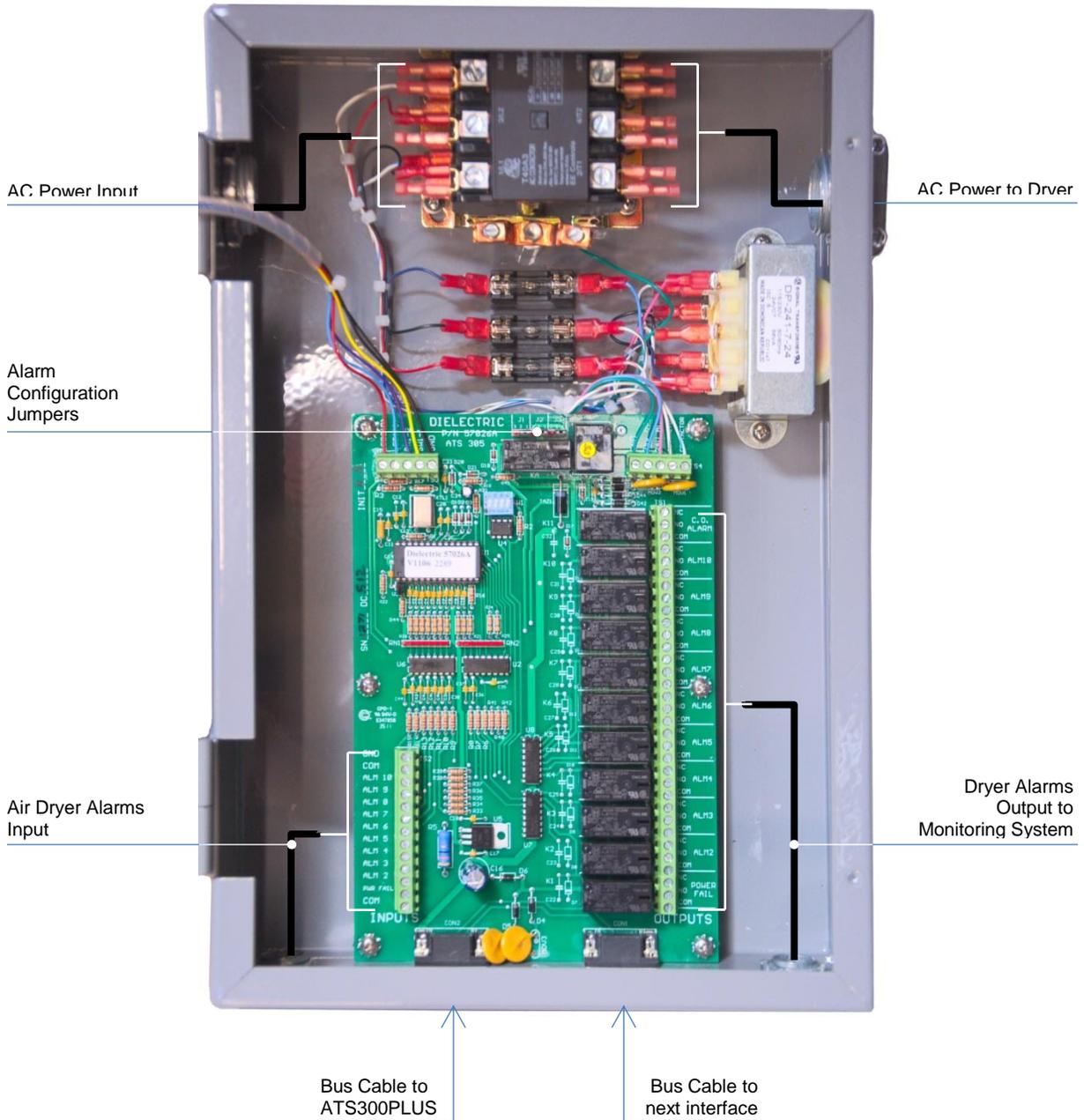
STEP 10- Additional Summary Alarm Output is provided and may be used. Connect in the same manner as above.

STEP 11- Route the bus cable with the 9-pin D connector from the ATS300PLUS to the mating connector located on the bottom of the interface panel assuming this is first system to be connected. If not, the cable would be coming from another interface. If daisy chaining to another interface panel, use the other 9 pin D connector located on bottom of the interface panel.

STEP 12- Refer to DIP SWITCH SETTING chart for setting the address switch located on the circuit board next to the Alarm input terminal board.

STEP 13- Reconnect the main power and start the air dryer with the ATS300PLUS turned off

ATS300PLUS INSTALLATION - OTHER MANUFACTURER'S AIR DRYERS (for 230 VAC, 1 & 3 Phase Air Dryers)



ATS-305 shown

4.3 Connecting to SmartTech Air Dryers

STEP 1- Route the bus cable with the 9-pin D connector from the ATS300PLUS to the mating connector located on the ATS/ALARM Interface Board (located at the back of the SmartTech Dryer) assuming this is first system to be connected.

STEP 2- If connecting to another SmartTech Air Dryer, use another bus cable with the 9 pin D connector and daisy chain between the ATS/Alarm Interface Boards.

NOTE: The ATS300Plus uses the MALE 9 Pin Connector and the ATS/ALARM Interface Board uses the Female 9 socket connector for the Input to the RS485 Communications port

STEP 3- To set the ATS Address, turn **On** the SmartTech Air Dryer and at the Front Panel press the MENU button, arrow down to SETUP, then arrow down to ATS Bus. Use the Arrow up or down buttons to select the address. (A1, A2, A3, A4, etc. then press OK) Set up the other SmartTech Air Dryers in the same way giving them a different address. Should the last Dryer in the Daisy chain be a SmartTech Air Dryer, terminate the “Last Dryer” using J4 Jumper Enable on the ATS/ALARM Interface Board signifying “END of Bus Termination.

Remove the two screws that hold the Interface in place and slide back a couple of inches. Move the jumper one pin to the right to terminate the Last Dryer in the series



⚠ WARNING: Turn off power to the unit and ATS300PLUS before proceeding

NOTE: The SmartTech Air Dryers come with a default ATS Bus address of A1. Each Air Dryer requires its own individual address. Do not use the same address for more than one Dryer otherwise improper operation of the Air Dryers will occur.

STEP 4 - Apply power (115VAC) to the ATS300PLUS CONTROLLER.

ATS BUS Last Dryer Jumper

Section 5 - ATS300PLUS SYSTEM POWER UP

5.1 INITIAL POWER UP and TEST

1. All LEDs and digital display segments will turn ON as the system powers up and performs its INITIAL START-UP ROUTINES. (Following the one (1) minute power-on delay)
2. The POWER ON indicator (●) will begin to blink. And the **UNIT STATUS DISPLAY LED's** will Blink YELLOW (●), wherever an air dryer unit is assigned to an address. (Example: If air dryer A is assigned to address #1 on its IUC panel (DIP SWITCH), the #1 LED (UNIT DISPLAY LED) will be indicating Blinking YELLOW (●).
3. All Day **indicator LED's** will be ON and the digital display (Transfer Time) will indicate 7:59am (or the new time if changed).
4. The **ROSTER #1 STATUS LED** will indicate RED (●) in most cases. And all ROSTER LISTING LED's will indicate GREEN.
5. The **ALARM LED** (●) will start blinking after 10 seconds and remain ON within 20 seconds of initial start-up.
6. Check that every air dryer unit has an LED blinking on the **UNIT STATUS DISPLAY**. If not, checks address setting on the IUC of the corresponding air dryer unit.
7. When all the air dryer units indicate they are present on the bus, Wait 3-minutes for the POWER UP DELAY to expire, the **POWER LED** will indicate GREEN
8. (●). At this point, all the air dryer units will be in START-UP sequence, which takes several minutes to complete.
9. The air dryer units will begin indicating RUNNING DISARMED, followed by a solid GREEN (●), indicating all units are RUNNING and ARMED.
10. The ATS is factory set with ROSTER #1 programmed to run all units and ROSTER #1 will be set as the current roster. This is the factory default setting.
11. Thus, when initial power is applied, all air dryer units will START and RUN and continue to run. It is necessary to off-load any empty rows from ROSTER #1. See Programming.

Section 6 - ATS300PLUS PROGRAMMING

The Dielectric ATS300PLUS is factory set to operate all air dryer units in ROW ROSTER MODE. It is necessary to choose at this time the mode in which your office will operate. In most cases the AUTO-ROTATION MODE will be selected. Consult the following chart for MODE selection advice.

Typical Dryer Configuration	PROGRAM MODE
2 New Air Dryers Requiring only (1) on line Example: 2ea-33000ST	USE AUTO-ROTATION MODE (Select 1 Dryer on Stand-by)
3 Same Model Air Dryers Requiring only (1) on-line. Example: 3ea.-16500ST	USE AUTO-ROTATION MODE (Select 2 Dryers on Stand-by)
3 Same Size Air Dryers Requiring 20,000 SCFD capacity on-line. Example: 2ea-22000ST, 1ea-25000	USE AUTO-ROTATION MODE (Select 2 Dryers on Stand-by)
5 Different Size Air Dryers Requiring 21,000 SCFD capacity on-line. Example:1ea-33000ST, 2ea-11000ST, 2ea-16500ST	USE ROW ROSTER MODE (Use 3-Rosters: ROSTER#1-1ea 33000 ROSTER#2 - 2ea 11000ST, ROSTER#3 - 2ea 16500ST)
2 Air Dryers - 1 in Constant Stand-by Example:1ea-11000ST & 1ea-old 10000SE	USE AUTO-ROTATION MODE (Select 1 Dryer on Stand-by, Select No Transfer Day)
AUTO-ROTATION MODE	Normal Cycling - Usually 2-8 Air dryers with similar flow capacities. Most offices will operate in AUTO-ROTATION MODE.
ROW ROSTER MODE	Non-Standard Cycling - Offices where dryers are not matched equally. Or where groups of dryers must operate at the same time to accommodate proper flows.

NOTE: If standard cycling is desired, skip to AUTO-ROTATION MODE.

6.1 ROW ROSTER MODE

TO ENTER ROW ROSTER FROM AUTO-ROTATION, first PRESS the LEFT INDEX and then RIGHT INDEX button and hold until a single number is displayed. Change number to 0 using the LEFT SELECT button and Press TEST/RESET button. Now the ATS300PLUS is in ROW ROSTER MODE.

TO ENTER ROW ROSTER PROGRAMING MODE, PRESS and hold the RIGHT INDEX button until the RED PROGRAM LED blinks (●).

PRESS the LEFT INDEX button until the desired ROW Roster is selected on the ROSTER STATUS DISPLAY (left). Then PRESS the RIGHT INDEX button to select individual dryer on the ROSTER LISTING DISPLAY (right). Then PRESS RIGHT SELECT button to select or deselect the dryer.

TO SELECT A DRYER for ROW ROSTER

PRESS and HOLD the right SELECT button, until the LED in the ROSTER LISTING DISPLAY blinks RED & GREEN (●●).

TO DESELECT A DRYER for ROW ROSTER

PRESS and HOLD the RIGHT SELECT button, until the LED in the ROSTER LISTING DISPLAY blinks RED & YELLOW (●●).

Blinking RED & GREEN (●●) = Dryer in Roster
Blinking RED & YELLOW (●●) = Dryer NOT in Roster
Blinking RED (●) = No Units in Row

PRESS the same RIGHT INDEX button again to move the blinking LED to the next dryer in the row and then PRESS the RIGHT SELECT button, to select or deselect. Repeat process until each ROW is setup with desired number of dryers. It is possible to select same dryer for several ROW operation.

Move the blinking LED down with the RIGHT INDEX button and repeat the process until all empty rows are utilized or deleted from the CURRENT ROSTER (#1). At this point the Roster #1 STATUS LED will change to GREEN.

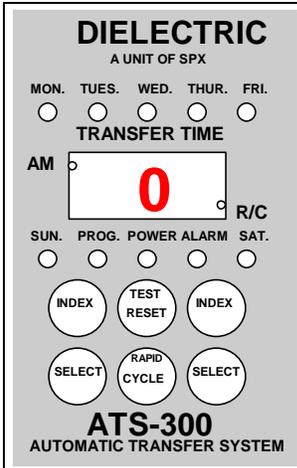
NOTE: It may be necessary to experiment until the desired combination is programmed. It is important to note the ATS300PLUS continues to operate automatically, even while in the Program Mode. And will automatically reset back to operational mode, if left unattended in program mode

6.2 AUTO-ROTATION MODE

PROGRAMMING the auto-rotation mode.

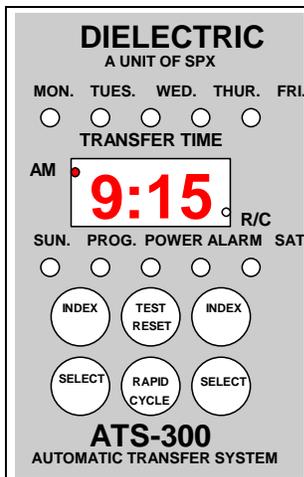
While HOLDING the LEFT INDEX button PRESS the RIGHT INDEX button and hold for several seconds until a number appears in the display box. If operating in ROW ROSTER MODE, a (0) will appear. Then PRESS the LEFT SELECT button to change number. The number represents the NUMBER OF AIR DRYERS YOU WANT TO HAVE ON STAND-BY. EXAMPLE: If your office consists of three (3) air dryer units, normally one- (1) is on-line and two- (2) are in stand-by. You would want to select number two- (2) in the display box.

When finished, PRESS TEST/RESET button to return to operating mode. If AUTO-ROTATION MODE is active, the display LED's will scroll continuously down the panel and stop momentarily on the number of stand-by dryer(s) that you selected. The AUTO-ROTATION MODE is the typical mode of operation. If operating in this mode, it is not important to set up the row rosters



6.3 Set the DAYS OF THE WEEK and the desired TIME OF TRANSFER. (Using WinCAM)

PRESS LEFT INDEX button until the RED PROGRAM LED blinks (●) and the SUNDAY LED is either GREEN (●) or blinking GREEN (◐). A steady GREEN indicates that the DAY is selected for transfer. A blinking GREEN indicates that the DAY is NOT selected. PRESS the LEFT INDEX button to move the cursor from day to day and then PRESS the LEFT SELECT button to either select or de-select that day. After Saturday has been programmed, pressing the LEFT INDEX switch will cause the display to show the TRANSFER TIME. To change the time, press the LEFT SELECT switch to change the HOURS, and press the RIGHT SELECT switch to change the MINUTES. Press the TEST/RESET button to restore the unit to normal operation. Observe the AM indicator, located on the upper left corner of the display, which ILLUMINATES to indicate AM.



6.4 Set the CURRENT DATE and TIME. ([Using WinCAM](#))

PRESS the TEST/RESET button once. The date and time will flash on display. To change the day, PRESS the left INDEX button until the RED PROGRAM LED begins to blink (●) and the GREEN current day indicator blinks (●). PRESS the LEFT SELECT button to move the day of the week indicator. After the correct day is illuminated, PRESS the LEFT INDEX button to access the time. PRESS LEFT SELECT button to change the hour and the RIGHT SELECT button to change the minutes. Observe the AM indicator (●), located on the upper left corner of the display, which ILLUMINATES to indicate AM. PRESS the LEFT SELECT to change the Month and Date. Use the Left Select to change the Month and the Right Select to change the Date. PRESS the LEFT SELECT to change the Year. The Left and Right Select to change the 2 digit Year. Press TEST/RESET button to exit.

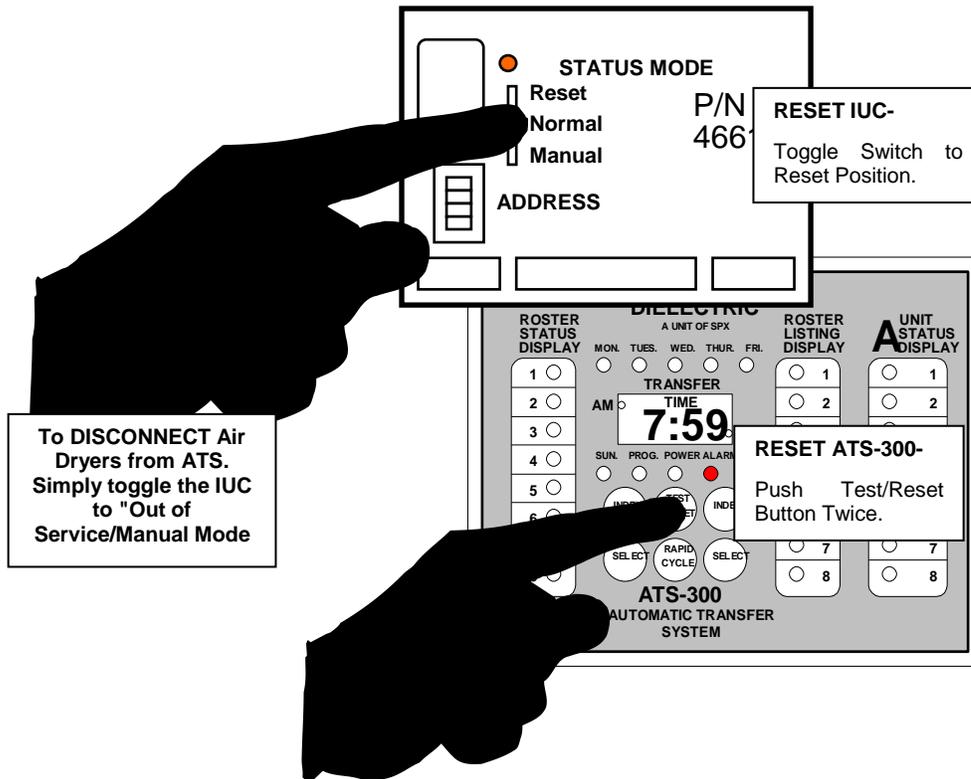
NOTE: The CURRENT DATE and TIME will need periodic updating due to some regions observing DAYLIGHT SAVINGS TIME

Section 7 - ALARM RESETTING

Following an Air Dryer Alarm, it will be necessary to RESET the alarm on the air dryer and the ATS300PLUS system.

FOR Units using the ATS304/305 Interface and IUC Panels

1. It will be necessary to RESET the IUC by toggling the switch to reset.
2. Reset the ATS300PLUS System by PRESSING the TEST/RESET button twice.



For ST Series Air Dryers

1. Press the Menu Button on the ST Display
2. Arrow down to RESET DRYER ALARM and PRESS YES
3. Press EXIT
4. Reset the ATS300PLUS System by PRESSING the TEST/RESET button twice.

Section 8 - OUT OF SERVICE / MANUAL CONTROL

The **OUT OF SERVICE/MANUAL CONTROL** feature allows users the ability to completely remove any air dryer unit from control of the ATS300PLUS anytime by simply toggling the IUC/ATS ALARM INTERFACE switch to MANUAL CONTROL and turning the unit Off and then On again using its main circuit breaker. In this mode the air dryer is NOT AVAILABLE for alarm backup. The unit is now controlled through its front panel ON/OFF switch. This mode is recommended when performing any type of service, maintenance or repair.

The ATS300PLUS will detect the unit being put into MANUAL CONTROL/OUT OF SERVICE and automatically adjust its alarm standby plan. The Unit Status LED will blink RED (●) to indicate mode.



WARNING! Always disconnect air dryer unit from incoming power before servicing

Section 9 - ATS300PLUS DISPLAY

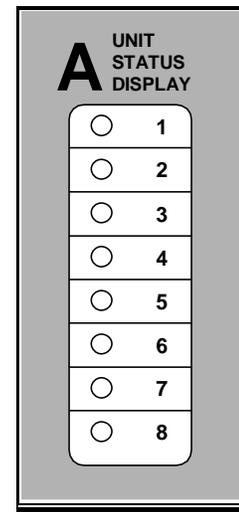
The ATS300PLUS is designed to provide detailed information, “At A Glance” regarding the status of air dryer units in the office, the duty rosters which have been programmed, and the days of the week and time of day when normal transfer occurs.

9.1 UNIT STATUS DISPLAY

Each air dryer unit has its own dedicated LED. The status of each air dryer unit can be learned from observing this LED. This Status LED can also be seen on each air dryer unit IUC panel

NORMAL OPERATION

- (●) **GREEN - Running & Armed** - The air dryer unit is running OK, and alarms are armed and clear.
- (●) **YELLOW - Standby & Disarmed** - The air dryer unit is in STANDBY mode and ready to operate. Its alarms are DISARMED.
- (●) **Blinking GREEN - Continuous Run** - The air dryer unit is in CONTINUOUS RUN mode. And can only be set using WinCAM software.
- (●●) **RED/YELLOW - Continuous Standby** - The air dryer unit is in CONTINUOUS STANDBY mode. And can only be set using WinCAM software.
- () **OFF** - No Unit Assigned



DURING TRANSFER

- (●) **Blinking YELLOW - Starting** - The air dryer unit is in START mode. A start signal is being transmitted to the dryer. The alarms are DISARMED.
- (●●) **GREEN/YELLOW - Running Disarmed** - The air dryer unit has been started and is RUNNING with alarms DISARMED, allowing unit to stabilize.

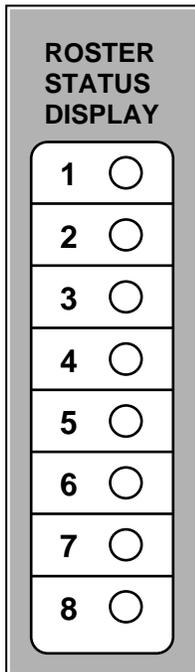
PROBLEM INDICATORS

- (●●) **RED/GREEN - Minor Alarm** - The air dryer unit is in MINOR ALARM and is continuing to run.
- (●) **RED - Major Alarm** - The air dryer unit is in MAJOR ALARM and will SHUT DOWN .
- (●) **Blinking RED - Manual Control /Out Of Service** - The air dryer unit has been taken OFF-LINE by switching the toggle switch on the IUC panel to Manual Control. Unit is not in standby and will require manual resetting for ATS300PLUS control. Resetting via modem is possible using WinCAM software.

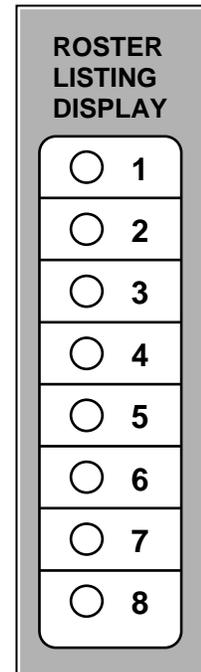
9.2 ROSTER STATUS DISPLAY

The Column of LEDs located on the left side of the ATS controller module is called the ROSTER STATUS DISPLAY and the column on the right side is the ROSTER LISTING DISPLAY. The code used for indicating air dryer roster status is as follows:

LED INDICATORS



- (●) **GREEN** - Denotes the current roster and indicates that all air dryer units assigned to the current roster are FREE OF ALARMS.
- (●) **YELLOW** - Indicates a PLANNED ROSTER in which all units are ready to run.
- (●) **RED** - The Current ROSTER IS BAD, i.e., contains a unit which is in ALARM or CONTINUOUS STANDBY (via remote).
- (●●) **Blinking RED & YELLOW** - A BAD PLANNED ROSTER.
- () **OFF** - An EMPTY ROSTER, no units.



Section 10 - ATS300PLUS REVIEW

TECHNICAL

The ATS300PLUS is an automatic transfer system to control multiple dryer installations. In its most basic configuration, the ATS300PLUS will control up to 8 individual air dryers. Above it. Each module consists of a column of 8 LED's called the UNIT STATUS DISPLAY. This display has one LED indicator for each air dryer assignment.

10.1 ABOUT THE BUS CABLES

The bus cable is a multi-conductor cable consisting of two (2)-shielded pairs and an overall shield. Each shield has a drain wire and the manufacturer adds an insulated communications line making a total of 8 lines in the cable. The pair labeled ONE is the 24VAC power for the IUC's. The pair labeled TWO is the RS-485 data bus. The RS-485 standard is a voltage differential bus, designed for high EMI industrial environments. The data bus provides reliable data flow. The shielding minimizes line noise interference. All data flow is confirmed with repeat transmission. This technique will detect any bit errors and has been found to be the most reliable technique for data transmission.

10.2 ABOUT THE IUC's

The IUC Panels, **Individual Unit Controller** is mounted on each air dryer unit. The IUC transmits and receives information to and from the ATS300PLUS controller via an RS-485 bus. The IUC has a receptacle for the "KEY" which defines to the IUC which type of air dryer unit it is controlling. These KEY's are supplied with every Dielectric air dryer. The same KEY is used for ATS300PLUS and ATS-200 installation.

NOTE: The ATS-304/305 Interface and ST Series Air Dryers requires no Key.

 **WARNING!** Dielectric Air Dryers DO NOT ALL USE THE SAME KEY. Using the incorrect KEY can cause damage to the equipment. Use proper KEY with installation. Problems often occur following replacement of older "Q" series air dryers. The "Q" series dryers used a different KEY than newer air dryers such as the "SE", "ME" & "RE" series.

Each IUC panel and ATS304/305 Interface is equipped with a three position switch, which is used to **RESET** an air dryer alarm, restoring unit to NORMAL operation following an alarm condition and to remove from ATS300PLUS control, i.e., **MANUAL CONTROL**

NOTE: Dielectric SmartTech Series Air Dryers have a built in IUC in the electronics and no KEY is required. A toggle switch in the back of the Air Dryer is used to place it in Manual Operation. ATS300PLUS addressing is handled through the Front Display under Menu, Setup, ATS BUS Address

10.3 ABOUT AUTO-ROTATION MODE

The AUTO-ROTATION mode is the simplest mode to program and is the mode that is used most often. This mode is perfect for central offices where the equipment is almost identical in age, capacity and reliability. In these cases, there is no reason not to operate in auto-rotation. During programming, specify the number of air dryer units to be held in STANDBY under normal conditions. The ATS300PLUS will rotate duty systematically through all the units. At each transfer the ATS300PLUS will automatically rotate one standby air dryer back into service and shut down one of the in-service air dryers, thus rotating duty through the entire office on a regular basis, maintaining the number of STANDBY units at any given time. Air dryer units designated for CONTINUOUS MODE or CONTINUOUS STANDBY (via remote WinCAM software only) will be excluded automatically from normal rotation. Also excluded from regular rotation are air dryer units that are switched "MANUAL CONTROL" and units that are in MINOR or MAJOR ALARM. These excluded units will be skipped over in the rotation process just as if they were not there.

10.4 ABOUT ROW ROSTER MODE

In most cases ROW ROSTER mode is simple and effective. Row Rosters are listings of groups of rows of air dryer units. In this mode all the air dryer units in a given horizontal row, as indicated on the UNIT STATUS DISPLAY operate as a team either operating together or in standby together. Units designated in CONTINUOUS modes are excluded from their respective rows. For CO's with 8 or less units, each unit constitutes a row. There are 8 definable rosters. ROW ROSTER mode allows some air dryer units to be scheduled for more operation. Groups of similar units can be operated together or mixed in a desired way with dissimilar units. This mode provides greater flexibility than auto-rotation. The user may program up to 8 different duty configurations or rosters and at transfer time the ATS300PLUS will automatically reconfigure the entire office to the next duty roster on the list. All rosters will be stored in non-volatile memory so the office will restore itself automatically following a power interruption.

In ROW ROSTER mode a dryer alarm interrupts the cycling of dryer units and the ATS300PLUS will begin starting standby units as needed. The ATS300PLUS will suspend any transfers from one roster to another until the alarm condition is cleared.

10.5 ABOUT RAPID CYCLE

Many of the procedures and responses programmed into the ATS300PLUS have lengthy cycle or delay times. It is recommended to avoid pressing RAPID CYCLE and allow these built in time delays to take affect during normal routines. In special cases where a technician may want to immediately review a change, it is possible to press the RAPID CYCLE button until the red indicator LED (R/C-dot located in the lower right corner of the digital display) energizes. Pressing RAPID CYCLE will accelerate the routines by 1/10 the time.

Only alarm responses are excluded. Alarm responses will still take 10 seconds. Following a start-up or shutdown routine, the RAPID CYCLE will cancel itself. **After a POWER UP** the ATS300PLUS initiates a 3-minute START/DISARM command to all available air dryers. Pressing the RAPID CYCLE button will cancel the 3-minute delay. Pressing the button a second time will speed up the remaining IUC operations needed to configure the office.

10.6 ABOUT POWER UP and POWER INTERRUPTIONS

The ATS300PLUS is designed with a start-up routine. This routine will place all air dryer units to pre-power alarm status, i.e., if unit was in alarm prior to the power loss, then the ATS300PLUS will remind the dryer of that condition. After this update each IUC immediately transmits a START and DISARM signal to its air dryer unit unless it was in ALARM prior to the power loss. This signal will be present for 3-minutes to ensure that all air dryer units capable of running are operating and free of alarms. During this moment, the POWER LED will begin blinking; indicating that it is operating in the power up routine.

POWER LOSS TO ATS300PLUS ONLY - Should the ATS300PLUS lose power, all air dryer units are placed into the RUN mode and operate. Air dryer units operating prior to a power loss to the ATS300PLUS will continue to run without interruption. Units requiring start and/or disarm signals from the ATS300PLUS will not start when power is lost. This is typically not a concern. All air dryer units operating at the time of power loss will continue to operate.

All air dryer units connected to an ATS-304/305 interface panel will run.

NOTE: When power returns to the ATS300PLUS, a one- (1) minute power-on delay occurs

Following the power-up routine and after the 3-minutes, the ATS300PLUS will reconfigure the office by placing in standby the units specified by its programming. Units operating before the power loss will continue to operate without interruption

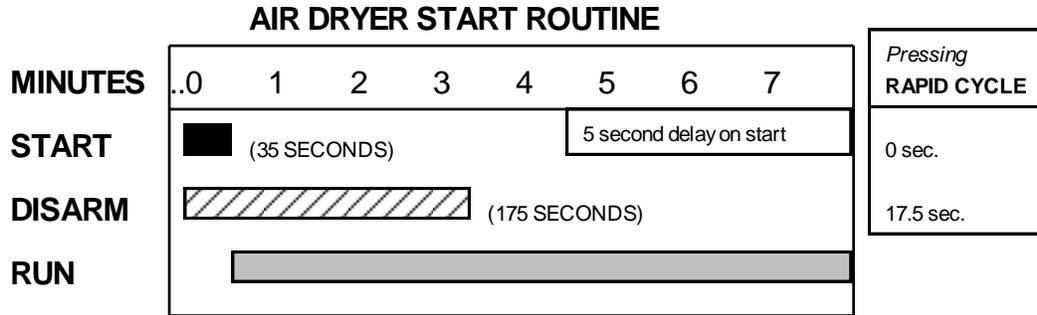
NOTE: A Power Failure Routine is part of the ATS300PLUS programming. This allows the ATS300PLUS to be hooked up to a BACKUP UPS system to provide uninterrupted power during a power outage. The ATS300Plus monitors each dryers Power Failure Alarm circuit when properly setup in the WinCam. When power is reestablished to each Air Dryer, the ATS300Plus will automatically issue an Alarm Reset Command and restart the Air Dryers without intervention

10.7 TRANSFER ROUTINES - STARTUP

When the ATS300PLUS initiates a transfer from one configuration to another or when it starts a STANDBY dryer in response to an alarm, the process begins with the controller transmitting a START signal to the unit(s) to be started. These signals are staggered based on the air dryer's bus address, preventing a large number of air dryers starting at the same moment. Once a START signal is received by an IUC, it starts the air dryer in accordance with the following routine.

1. 5 second delay
2. 35 second (START/DISARM)
3. 175 second (RUN/DISARM)
4. RUN and ARMED

This routine can be accelerated using RAPID CYCLE. The time interval is reduced by factor of 10.



10.8 TRANSFER ROUTINES - SHUTDOWN

The ATS300PLUS controller monitors the above routine and awaits confirmation from each IUC that all air dryer units are properly started and running free of alarms. Once the controller confirms that the units to run are running and free of alarms (this represents all dryers that were OK prior to interruption) it then allows the air dryers to run with their alarms armed for **60 seconds**.

The controller allows all the on-line units to continue operation for 60 seconds, allowing the IUC's to detect and latch any alarms which may be present and to establish what air dryer(s) scheduled for STANDBY must remain running to cover the detected alarm conditions.

Following this period of operation the controller will transmit, at **10 second intervals**, first a DISARM signal and **5 seconds** later a STOP signal to each unit to be placed back into STANDBY.

10.9 ALARM RESPONSE ROUTINES - AIR DRYER UNITS

The ATS300PLUS has two levels of ALARM detection for control purposes. An air dryer unit **MINOR ALARM** will cause the ATS300PLUS to start a standby unit and continue to run the air dryer unit in minor alarm. The MINOR ALARM will latch in after 10 seconds of uninterrupted alarm condition and will require a technician reset at the IUC (via office visit or remotely with WinCAM software). Following an office power interruption, the ATS300PLUS will restart units in MINOR ALARM and re-establish the MINOR ALARM condition at the IUC and go through its power up routine after the 1-minute delay.

The response for an air dryer unit in **MAJOR ALARM** is identical to the above except that the ATS300PLUS will transmit a STOP signal to the air dryer unit in major alarm. The alarm condition must be reset. Following an office power interruption, the ATS300PLUS will not start any air dryer unit in MAJOR ALARM. **DURING generator testing** in which the ATS300PLUS remains on-line (or connected to a UPS power supply), the ATS300PLUS will interrupt the dryer alarms as a "ALL COMPRESSORS FAILURE" and automatically go through its start-up routine (blinking power led) resetting the units IUC's and restarting the air dryers.

NOTE: The ATS300PLUS will not interfere with any air dryer unit's shutdown feature

10.10 ALARM RESPONSE ROUTINES - ATS300PLUS SYSTEM

The ATS300PLUS ALARM LED will blink RED whenever an air dryer unit is in ALARM or if the ATS300PLUS detects an abnormal condition in the office. A MINOR ALARM will be transmitted from the ATS300PLUS alarm terminal board. If the ATS300PLUS detects an air dryer unit alarm and not be able to start a standby unit, the ALARM LED will indicate a solid RED and will transmit a MAJOR ALARM at the ATS300PLUS alarm connector.

Section 11 - DIELECTRIC ATS WinCAM SOFTWARE

The ATS300PLUS is equipped with a telephone modem which allows it to be accessed from virtually any Windows™ OS based personal computer equipped with a modem. WinCAM is not compatible with Macintosh machines.

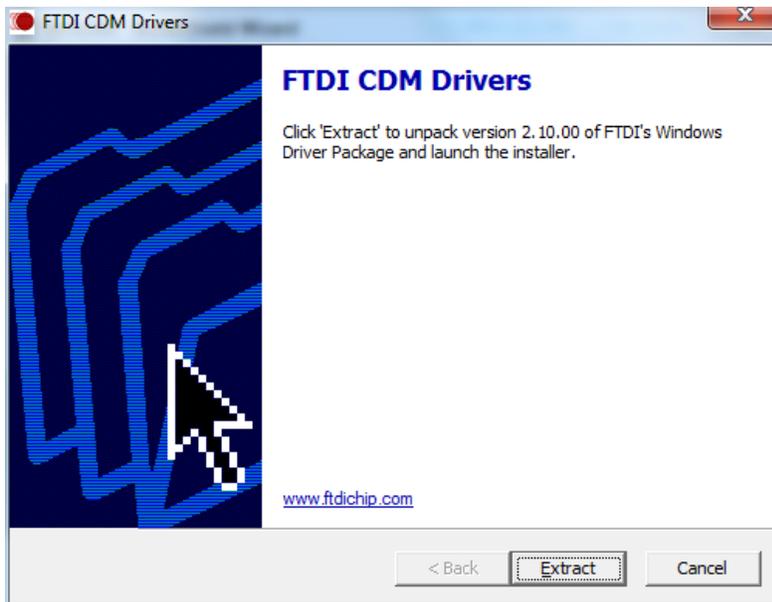
⚠ WARNING! Only Versions 3.xx WinCam software will work with the ATS300PLUS and it is backwards compatible with the older ATS300s.

If connecting with an older ATS300, passwords must be entered in **all capital letters**. WinCam versions 2.xx will **not** connect with the ATS300Plus

11.1 WinCAM - SOFTWARE INSTALLATION INSTRUCTIONS

NOTE: for USB support install WinCAM version V3.30 or higher. Earlier versions will work with the exception of USB connectivity.

To install the program: Go to **START > RUN** and type in your CD drive letter followed by: \setup. The program automatically self-installs and places an icon onto the desktop. The USB CDM driver needs to be extracted and the following window will pop up during the install process.



Click “Extract” to begin the extraction.

To launch the program, double click the WinCAM Icon on your desktop.

11.2 INITIAL SETUP

Following initial program installation, it will be necessary to setup your computer communications via your modem.

11.3 MODEM SETUP

Once launched, go to **File > SETUP > MODEM** and set the **COM** port (1 through 16) of the modem.

Then select the **Modem Type**. If your modem is not shown here, try selecting all the Generic (2400 baud) modems. In most cases one of them will work.

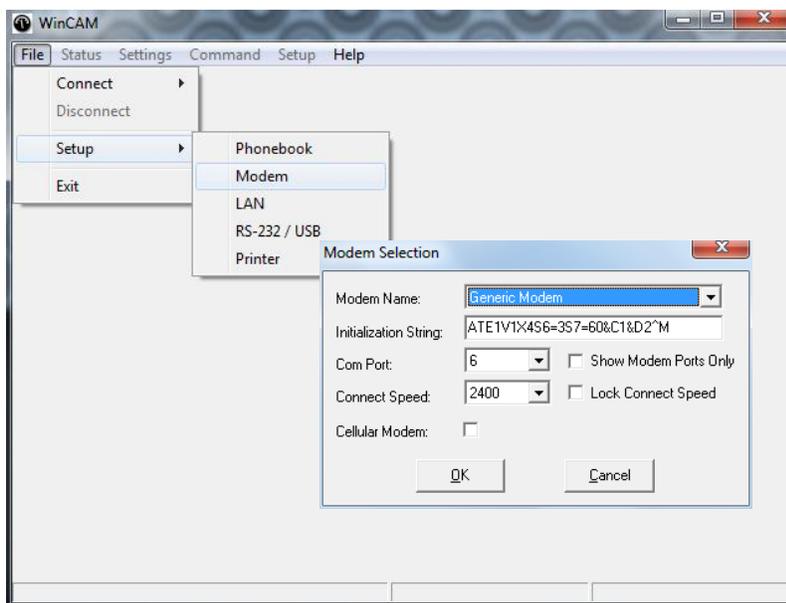
11.4 MODEM ISSUES

If the Generic modem selection does not allow your modem to connect to an ATS300PLUS, then first try selecting other modems on the list. If connection is still not achieved, some tweaking of the initialization string may be necessary. Contact the factory.

11.5 EDIT MODEM STRING

If your modem is not found, try editing your modem initialization string. First select generic from the list. Find your modem manual and look up the Command for setting the "DTE" speed to 2400 baud.

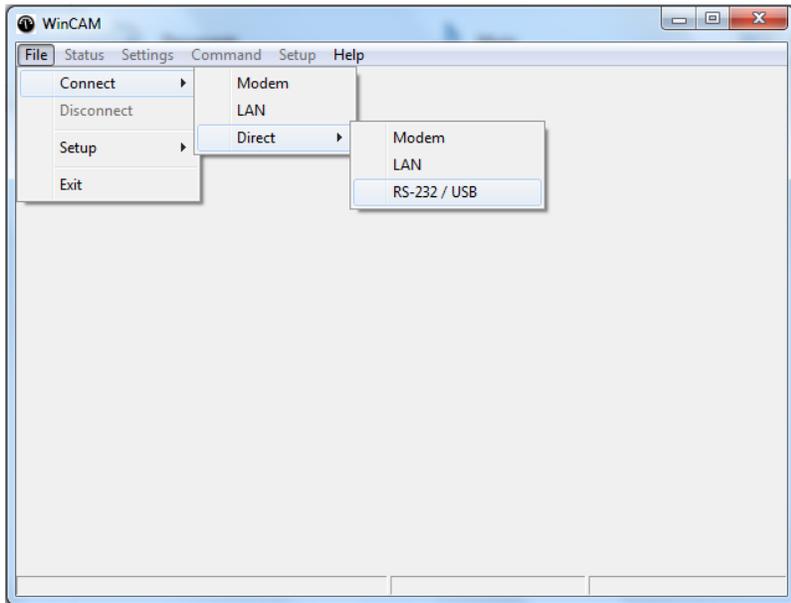
Then insert that command into the modem string between the "D2" and the "^M" and click OK. Retry until proper communication is achieved. The string must start with an "AT" and end with "^M".



11.6 TO COMMUNICATE WITH AN ATS300PLUS

Go to **File > Connect > Modem** and enter the telephone number and click OK.

Then enter the **PASSWORD** and click **CONNECT**.

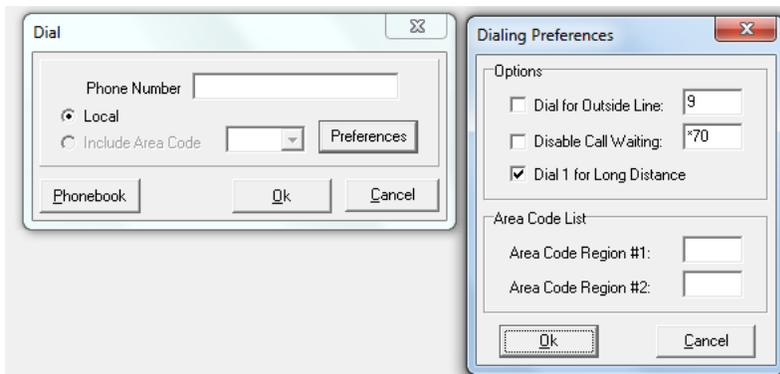
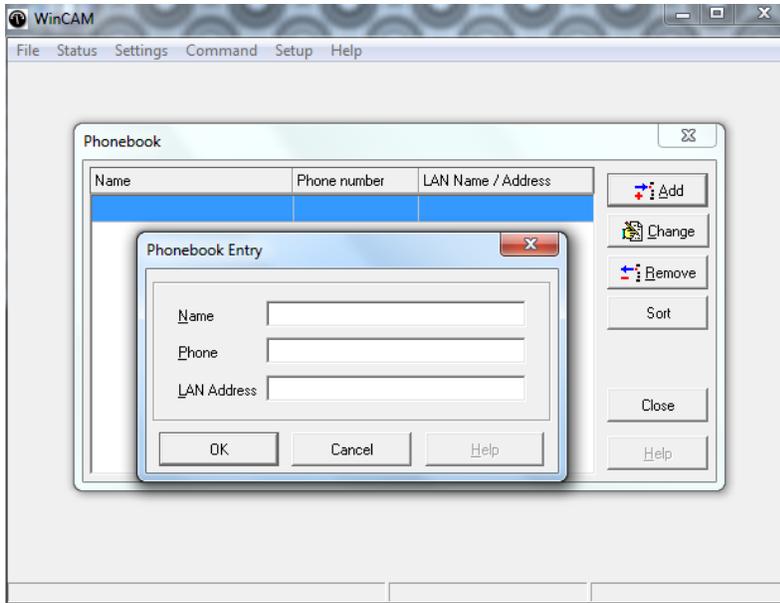


NOTE: The Default PASSWORD is ***DIELECTRIC>** where DIELECTRIC is all capitalized

WinCAM will begin dialing the selected office and within a few seconds of modem connection, will begin downloading office information from the ATS300PLUS. Connection will be complete.

11.7 SETTING UP THE PHONE DIRECTORY

1. Go to **FILE > SETUP > PHONEBOOK**



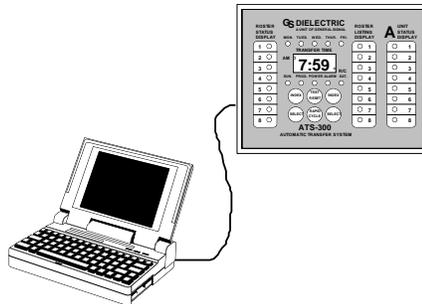
2. Click the **ADD** button and the Phonebook Entry window will appear.
3. Enter Name of Office, Phone number of dedicated line connected to the AT300Plus and LAN Address if one is assigned.

11.8 DIRECT CONNECTION USING LAPTOP

1. To connect directly into the AT300PLUS, simply plug modem directly into the AT300PLUS and Go to **File > DIRECT > MODEM** and click OK. Then enter the **PASSWORD** and click **CONNECT**.

WinCam will prompt you to Press and hold the Right then the Left Index keys on the AT300Plus. PHO will show up in the ATS Display. Following download, connection will be complete.

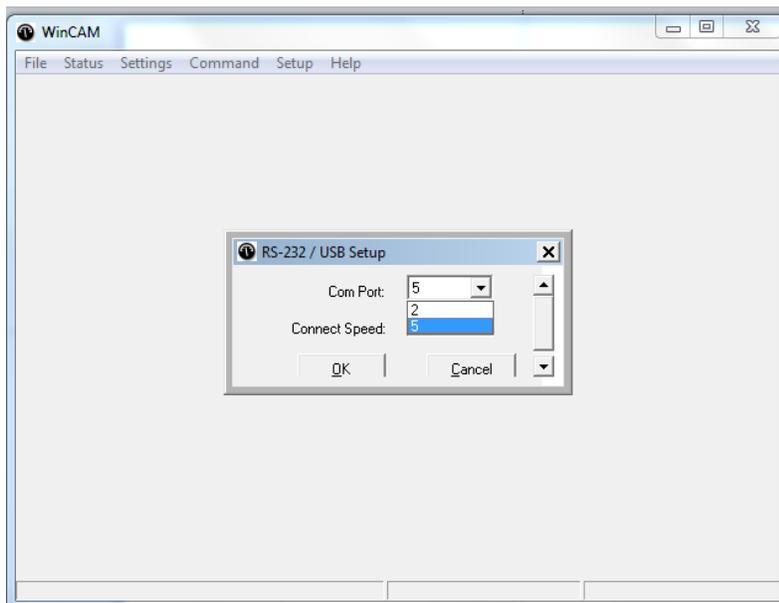
NOTE: Not all Laptop Modems are compatible to make a Modem to Modem connection. The PC Modem has to be able to generate a dial tone signal in order for this type connection to work. See below for an alternative connection using the USB Port



2. **DIRECT CONNECTION WITH USB PORT OR LAN.** Direct connection with a USB cable (Type A to Type B) is available. Connect the Type A connector to your computer's USB port and the Type B connector to the ATS300Plus USB Port.

Go to **File > Setup > USB/RS232** and set the correct port setting.

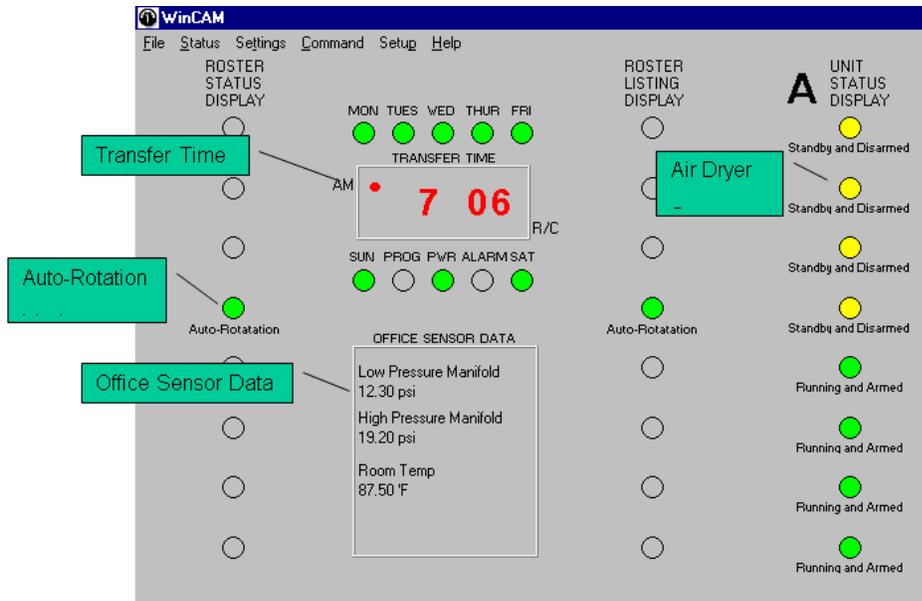
For the LAN Connection, a TYPE 586-A Crossover Network Cable may be required.



The Default IP address of the built in LAN Card is 172.29.30.243. Subnet Mask is 255.255.0.0. See additional instructions and Utility program on the WinCAM Software CD. You may be required to consult with your IT Department to properly set this up on the company network.

11.9 WinCAM SOFTWARE AND FEATURES

WinCAM is Windows based software, allowing for simple point and click operation.



11.10 CAM FACE SCREEN

The Default screen following ATS Connection is the CAM face screen. This screen is a virtual simulation of the actual face of the ATS300PLUS located at the Central Office. This screen is designed to allow users to quickly look and see the nearly "real-time" status of the office.

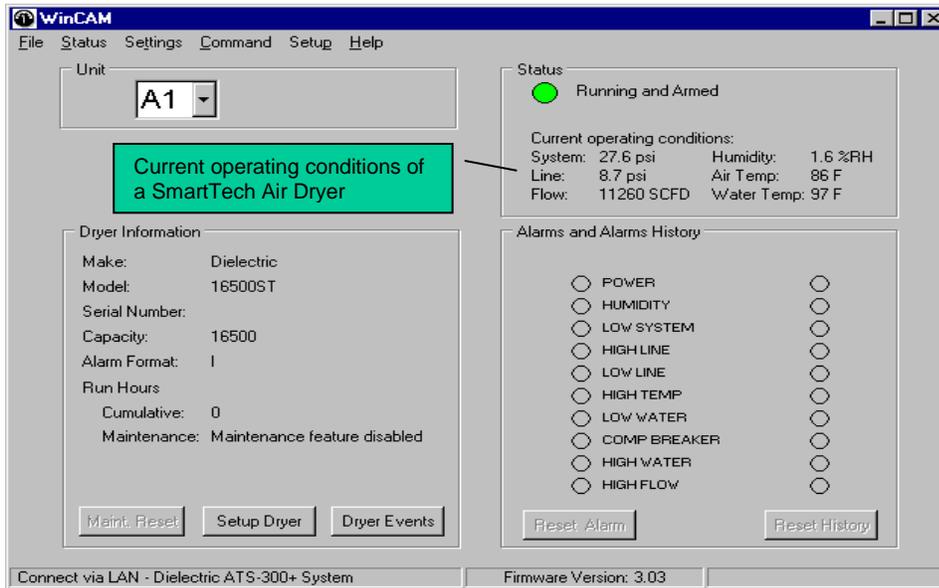
This screen will indicate Air Dryer Operation Status, Transfer Time and Programmed Rotation Mode and Office Sensor Data (if optional analog sensors are connected) instantaneously. From this screen all other functions can be assessable.

11.11 OFFICE STATUS

The OFFICE STATUS screen will display the Office Identification, Access Telephone Number, Time and Date. User enters the content during initial office setup.

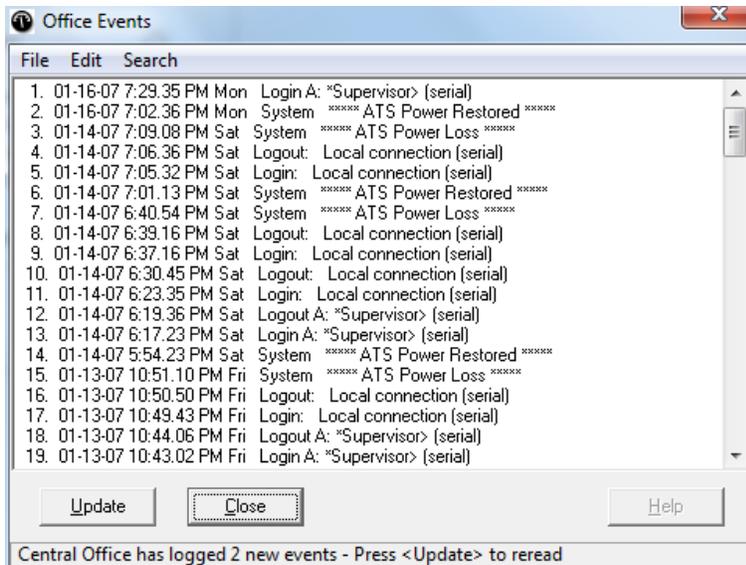
11.12 DRYER STATUS

The DRYER STATUS screen will display the Air Dryer information, Alarm Information (History), Run Time Hours and Maintenance Information. SmartTech Dryers (only) will show actual current operating conditions.



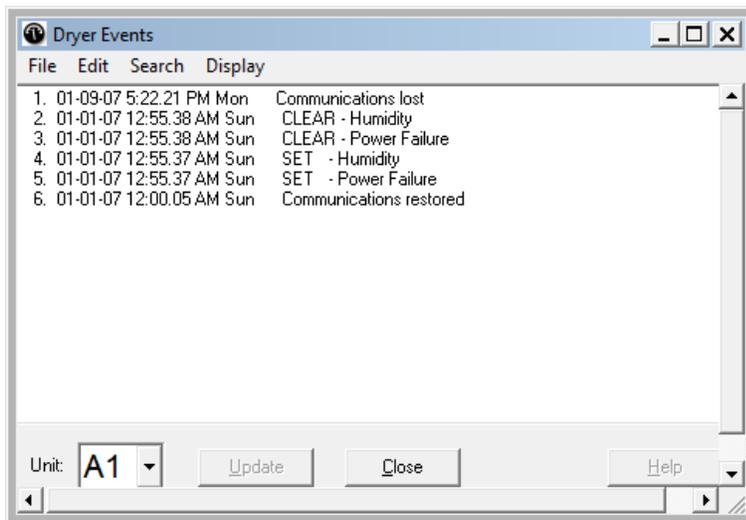
11.13 OFFICE EVENTS

The OFFICE EVENTS screen will display all central office events for this ATS300PLUS. Each time an event occurs, like Power Outage, Automatic Transfer, Air Dryer Alarm, etc. The event is logged for later retrieval. This screen will hold 120 events. As a new event occurs, the oldest event is automatically purged.



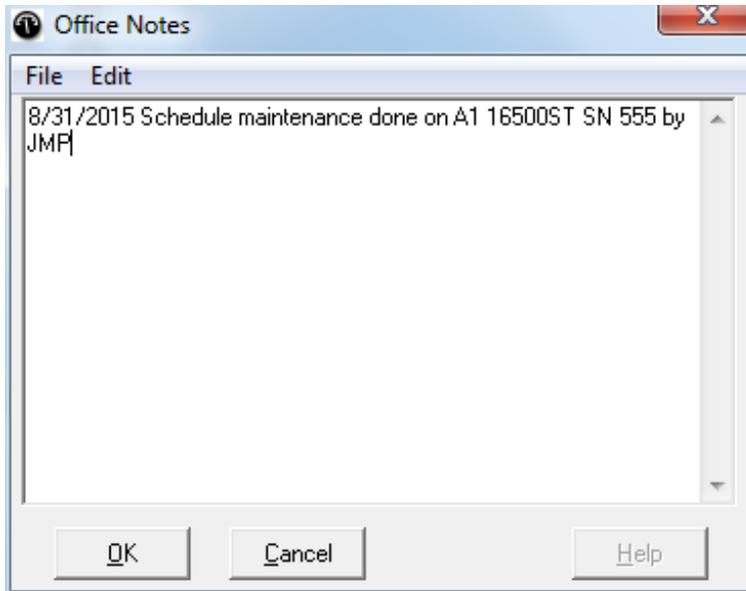
11.14 DRYER EVENTS

The DRYER EVENTS screen will display all INDIVIDUAL DRYER events for this ATS300PLUS. Each time a DRYER event occurs, like Power Outage, Automatic Transfer, Air Dryer Alarm, etc. The event is logged for later retrieval. This screen will hold 75 events. As a new event occurs, the oldest event is automatically purged.



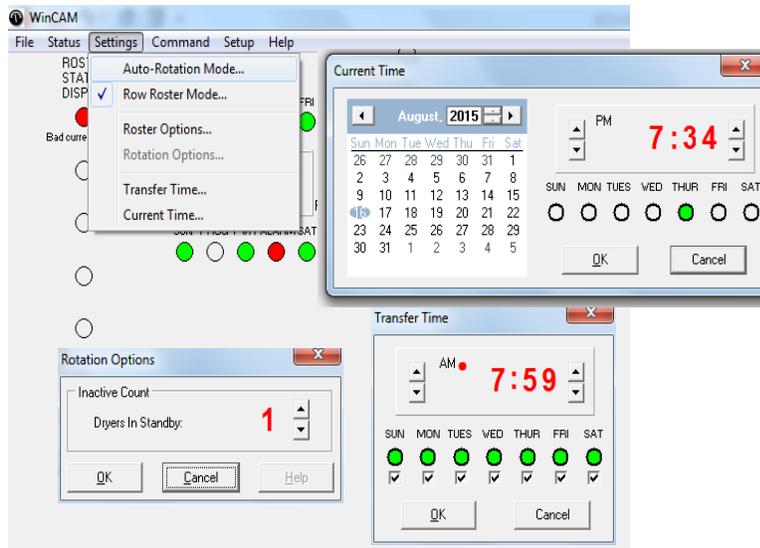
11.15 OFFICE NOTES

The OFFICE NOTES screen allows certain information to be typed into this screen by technicians. Up to six 80-character lines is available.



11.16 TRANSFER TIME

The TRANSFER TIME screen allows user to change transfer day(s) and time remotely via WinCAM.



11.17 CURRENT TIME

The CURRENT TIME screen allows user to change current time remotely.

Section 12 - ATS300PLUS SYSTEM

SECURITY

The ATS300PLUS is equipped with a 4-level security system: Supervisor, Technician, Monitor, and Blacklist. Factory default setting will include the password ***DIELECTRIC>**. This password is installed at the factory for first gaining access, however it can be deleted once other Passwords have been established. DO NOT Delete the ***DIELECTRIC>** password before verifying all the new passwords being added work. Note that DIELECTRIC is in all capital letters. If using the Caps Lock key, the Shift key is needed for the "*" and ">" symbols.

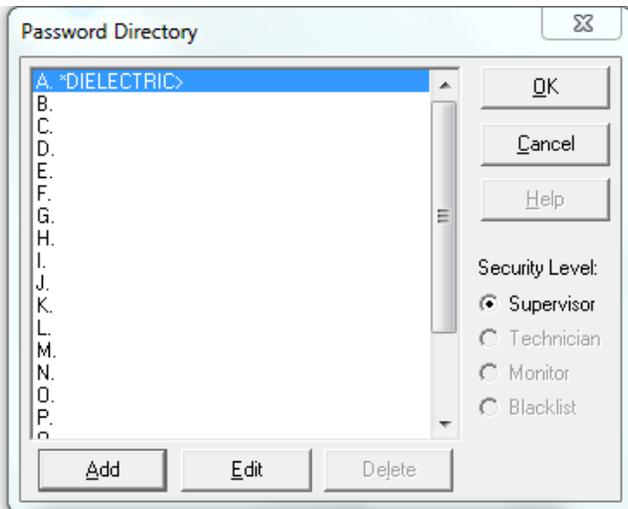
NOTE: When assigning Passwords, the passwords are CASE sensitive so it will recognize both upper and lower case letters. Also Security Levels choices are Supervisor, Technician, Monitor, and Blacklist. The Supervisor level has full programming access to the ATS300PLUS, the Technician has most programming access but is restricted from the Password Window, the Monitor has access to dial into the ATS300PLUS but has no programming access, and Blacklist is denied access to a ATS300PLUS.

NOTE: An outside person cannot access the system without having WinCAM software.

12.1 PASSWORD FORMAT

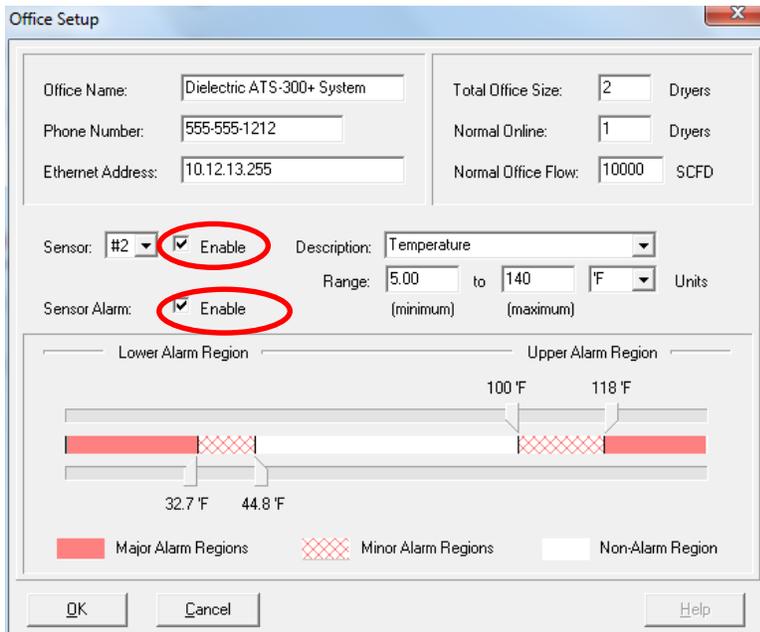
It is possible to store up to 24 different PASSWORD. A password must consist of an "*" followed by up to 10 characters followed by the greater sign ">" (eg ***DIELECTRIC>** or ***ATS300>** or simply ***>**).

Using individual passwords for each technician allows the WinCAM status log to record the password of the person calling in for future reference. The Supervisor is the only one that will be able to see who has called in from the Central Office Event Log.



Section 13 - ANALOG SENSOR SETUP

1. The Analog Sensor Data Setup Window is found under **SETUP > OFFICE**.
2. Check the “Enable” box and select the Analog sensor number (1 through 4). This number must coincide with the sensor terminated at the Analog Input Connector.
3. Enter the Description of the Sensor with the overall range and unit of measure. Some of Dielectric’s Sensors have been already pre- programmed with the setup information.
4. The **Minor** and **Major** Alarm setup is optional. If the **Sensor Alarm Enable** Check Box is unchecked no ATS alarm will occur. To set the **Lower** and **Upper Sensor Alarm**, drag the Tabs to define the **Major**, **Minor** and **Non-Alarm** regions. See the example below showing color coded Non Alarm and Alarm Regions.
5. Enable the Sensor Alarm with a Check mark in the box.



Section 14 - ALARM MONITOR PAGER/ EMAIL SETUP

Look under **SETUP** submenu for **ALARM MONITOR**

1. **Pager/Email Status Enabled check-box.**

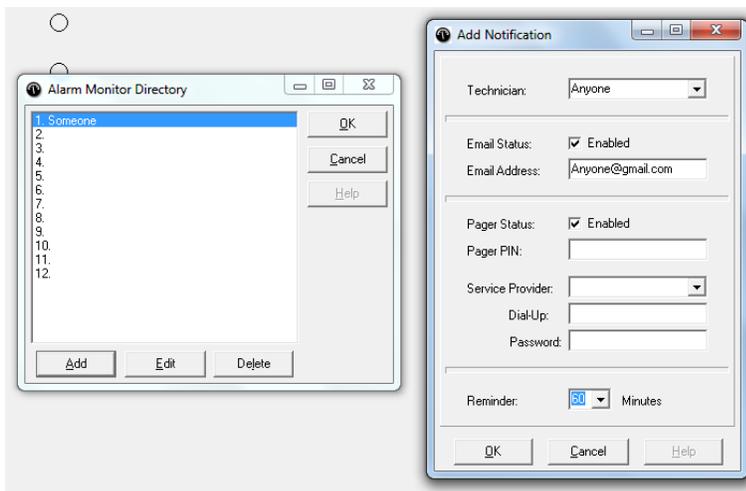
The checkbox must be checked for the specified pager/Email address to be alerted.

2. **Tech name.**

The Technician Name field is an editable drop down list, so that (in future implementation) multiple offices can easily be set up by simply selecting the technician's name so that all pager setup fields will automatically be filled-in.

3. **Email Address.**

Enter Email address where Alarm Notification is to be sent.



4. **Service Provider / Dial-Up Fields**

The Service Provider field is an editable drop down list, so that (in future implementation) additional pagers across multiple offices can easily be setup by simply selecting the Service Provider name so that all Service Provider fields are automatically filled-in.

Auto-completion reduces risk of errors in Service Provider dial-up modem phone number / dial-up password in manual reentry of information. The Service Provider password is optional, and is needed only if the dial-up modem pool requires a password for login to the paging system.

NOTE: The paging feature should be tested on-site at the CO prior to its use. That is, after setting up all pagers, a test run should be conducted by generating a dryer alarm condition, and verifying that all pages are received properly.

5. Reminder Page

In order to address paging system outages and out-of-range technicians, the ATS300PLUS will transmit duplicate Pages/Emails at fixed intervals, assuming that no new alarm event occurs during the delay period. All alarm events are reminded at the same intervals, there are not separate reminder intervals for minor or major C.O. alarms.

The Reminder Page/Email feature can also be turned off. This is an office-wide parameter, applicable to all Pagers/Emails. Changing this parameter on one pager in an office changes the parameter for all Pagers/Emails in that office.

NOTE: The reminders are issued every x minutes, per the setting, until the alarm is cleared (and the '**Alarm Cleared**' page sent). A setting of '**Off**' is a one-time alarm page. The reminder page setting is only applicable to outstanding alarm conditions. The '**Alarms Cleared**' message is only sent once, regardless of the reminder setting.

6. Paging Operation

The ATS300PLUS paging feature complies with the TAP (Telocator Alphanumeric Protocol) protocol, the most common alphanumeric paging standard. The ATS300PLUS realization is highly generic; to work with the most restricted implementation of the protocol. Paging systems which deviate from the TAP standard may not be compatible with the ATS300PLUS.

A paging event is triggered by any dryer alarm, which results in an ATS alarm. A minor ATS alarm precedes the resulting outgoing alarm page by 3.5 minutes. This gives ample time for the required standby dryer to come online. This 3.5-minute delay is refreshed for each new alarm incident, for as long as a minor ATS alarm is maintained. A major ATS alarm precedes the resulting outgoing alarm page by 30 seconds. This delay is added only to give an on-site operator time to physically reset dryer alarms / ATS alarm if any are triggered during on-site service or troubleshooting. The thirty-second delay is **not** refreshed by any additional alarm events.

Since the ATS300PLUS is only allowed one serial port access to the system at a time, no pages are issued while any ATS300PLUS serial port is accessed, either via RS232, Ethernet, or modem. While the ATS300PLUS is restricted from issuing outstanding pages, all alarm detection mechanisms and paging timers are still active. Pages that could not be conducted due to an overriding port connection are conducted 30 seconds after the ATS300PLUS has disconnected (and remains disconnected). The RS232 and Ethernet ports are hardware disabled while a paging session is active. For each active pager, the ATS300PLUS attempts delivery of the text message three times before advancing to the next pager. While the TAP protocol ensures valid delivery of the text message to the paging system, since the paging message transport is unidirectional from the paging system to the individual pager, no guarantee can be made that an alarm page will be delivered. Paging system outages and maintenance, and out-of-service area / fringe reception are examples of issues that may prevent the delivery of alarm messages.

7. The alphanumeric message format for paging

ATS-300PLUS Alarm: <Office ID Name> : <Major System Alarm, Minor System Alarm, All Compressor PF or Alarm Cleared or No Message> : <ATS300PLUS Timestamp (time of system alarm)> : <Dryer ID (A1 thru A8) and Current Dryer Status (at time of paging)>: example A1: Major Alarm, Minor Alarm, Power Fail, Manual, Standby, Starting, Running, Backup Starting, and Backup Running

8. The message format for email

ATS-300+ Alarm -- CO Test Office -- 01:36pm 03/28/07 -- Major System

> Alarm -- A1 Major alarm: High water - A2 Major alarm: High water - A3

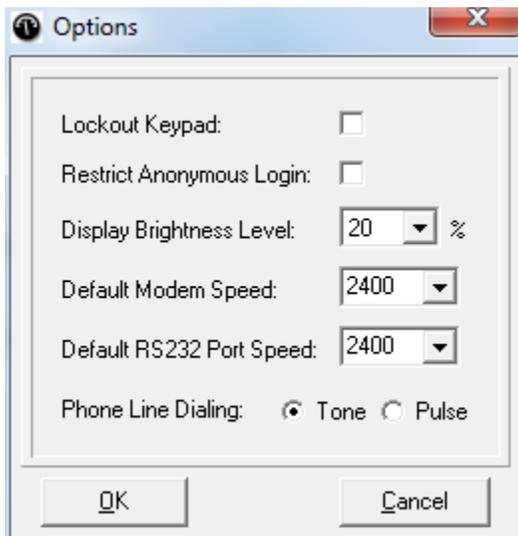
> Power fail - A4 Minor alarm: Low Water - A5 Minor alarm: Circuit breaker -

> A6 Minor alarm: High line pressure - A7 Minor alarm: Low line pressure -

> A8 Backup starting

Section 15 - Options Setup Window

1. The Options Window is accessed under **SETUP FEATURES**
2. Settings for Lockout Keypad, Restrict Anonymous Login, Brightness Level, Modem and RS232 Default speed and Phone Dialing Properties options are selected here.



3. The Lockout Keypad feature if checked will prevent any local tampering of the AT3300Plus via the Keypad. The only access allowed will be through WinCam via phone, LAN, or USB connection.
4. The Restrict Anonymous Login, if checked, will require a password to be entered if using Direct Connection or a LAN Connection to the AT3300PLUS. Otherwise unchecked bypassing the password in Direct Connect will allow only Technician security level. A password is always required for Supervisor level access.

Section 16 - LAN Ethernet Card Setup

NOTE: It is recommended that a fixed IP address be used with the Ethernet Module. See your IT administrator for an IP Address, Subnet Mask and Gateway assignment. Additionally, if utilizing the available SMTP server functionality (for email alarm notification) the SMTP server name and DNS addresses or just the IP address will also be required.

The default Static IP address is 172.29.30.243, SubMask 255.255.0.0.

DHCP has been disabled as many Local networks are disabling this feature. Use the steps below to access the Module.

This method connects the LAN Card directly to your computer using a Crossover Cable. A Standard Network Cable may work if the Laptop will automatically recognize and correct for the connection.

NOTE: You may need to disable or bypass some programs in your laptop prior to installation to allow the Installation utility programs to work properly. Consult your IT Support group for instructions.

1. Connect both the computer and "ATS300Plus LAN Card" directly using a Standard or Crossover Cable. Plug in the ATS300PLUS and wait for it to power up
2. Install the AutoDiscovery.exe program (on CD) onto the laptop and launch Auto Discovery Manager.

NOTE: The Autodiscovery Program will NOT operate directly off the CD .

3. Use the Auto Discovery Manager program to view the default IP Address assigned to the LAN Module.

Double Click on the Line 1 to bring up the EDIT window.

Change the IP Address and Sub Mask to your assigned numbers.

Click the Set button. The Log Window should display the update change. You may now close the Auto Discovery Manager program.

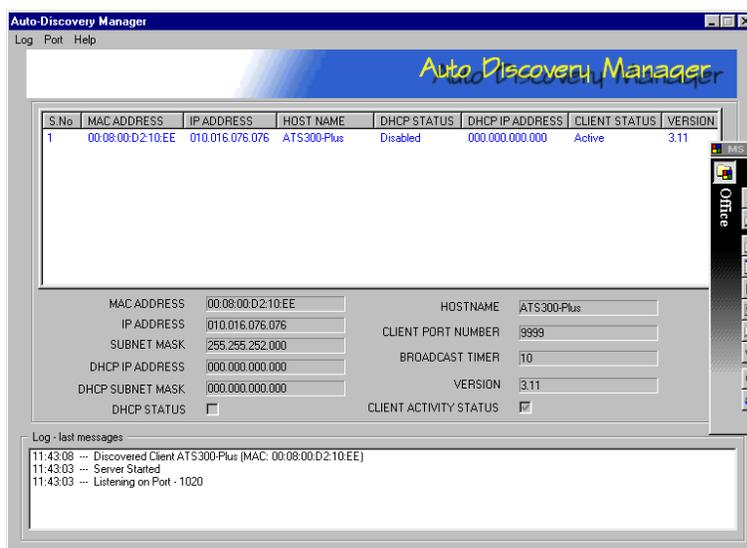
4. Next, launch the LANCARDCONFIG.EXE application. This Program can be launched directly from the CD. The ATS300 Network Config dialog box will appear.
5. Enter the assigned IP address (as changed in Step 3) in the box as indicated below. Note that the format must be 4 valid sets of digits separated by "." eg 172.29.30.243
6. Enter in the boxes as indicated the default Username and Password, "admin" and "wincam" respectively.
7. Click the button labeled "Receive Parameters".
8. Confirm that DHCP to Disable and Assigned Fixed IP , Subnet Mask are correct. Change and update with your Gateway addresses and add SMTP Configuration data. Also add the Primary and Secondary DNS addresses if SMTP Server Name is used. If IP address is used, then leave DNS

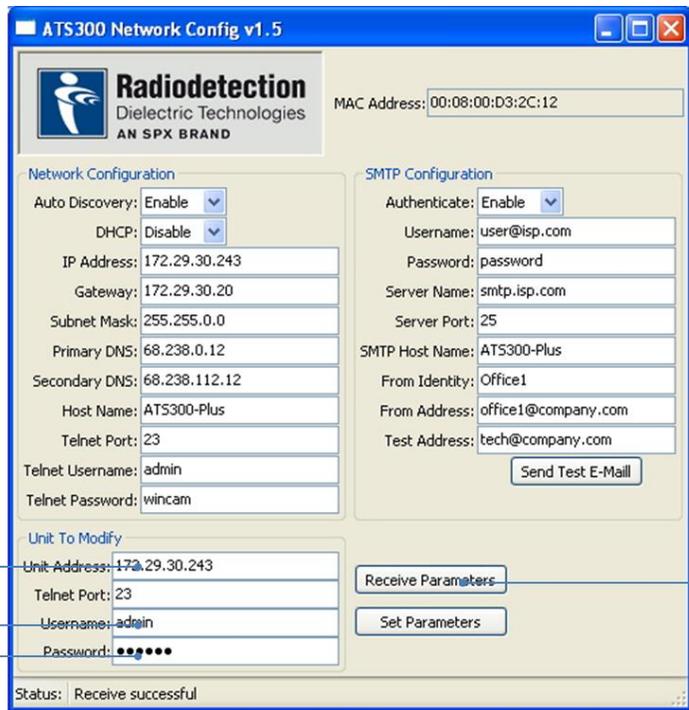
blank. The Host Name can be changed to help identify the unique offices that the ATS is installed in.

Up to 26 Characters long with NO spaces is allowed. When finished Click the **Set Parameters** button. Example shown below. For SMPT setting, check with your IT Administrator to see if **Authenticate** should be ENABLED (User name and Password may be blank). After **Set Parameter**, try sending a Test Email by clicking on the Send Test E-Mail Button

NOTE: The LAN Card **MUST** be connected to your **NETWORK** first. If the Email Test **FAILS**, the Status Line at the bottom will display "ERROR: Send Fail (AT#Sendmail2)". Try Test again if failed.

9. Launch WinCam 3.20 software and higher versions. This is where you setup your Email Addresses. Go to Setup, Alarm Monitor then click ADD. Then fill in the Email and Pager information as required. Up to 12 Email addresses may be added.
10. Add new ATS300PLUS IP addresses in the WinCam 3.20 Phonebook. You may edit those that already have a Phone number. Go to **FILE > SETUP > PHONEBOOK**



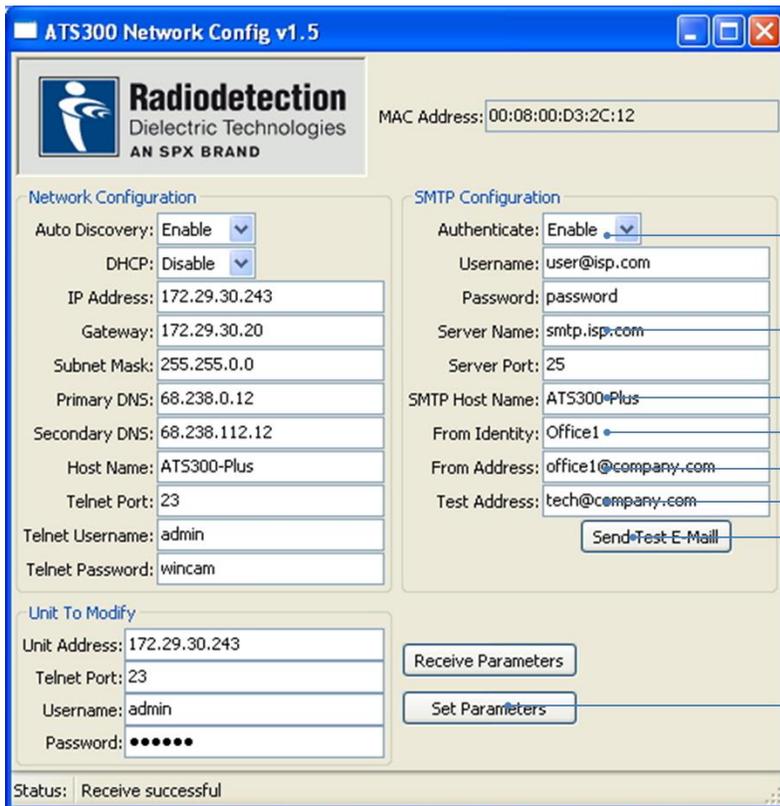


Enter the IP address here

Default is admin

Default is wincam

Click here after entering IP, Username and Password



May need to Enable even if User/Password not used

SMTP IP address may be used

Client Hostname may be required

Use office location

* Use officelocation@company.com

Use valid email to test setup

Click to send test email after Set Parameters performed

Click Set Parameters button when ALL changes have been made

* NOTE: May require a valid email address if SMTP server checks it

Section 17 - CENTRAL OFFICE EVENTS GLOSSARY

The following table is a list of possible central office events recorded by an ATS300PLUS:

REMOTE START	Placing an air dryer in REMOTE RUN through WinCAM Software.
REMOTE STANDBY	Placing an air dryer in REMOTE STANDBY through WinCAM Software.
MINOR ALARM	An air dryer alarm will signal the ATS to start a standby air dryer and will continue to run.
MAJOR ALARM	An air dryer alarm will signal the ATS to start a standby air dryer and STOP the air dryer in major alarm.
SYSTEM ALARM RESET	Indicates SYSTEM ALARM RESET by the ATS.
*****POWER RESTORED*****	Indicates power restored to the ATS.
BACKUP BROUGHT ON-LINE	During an alarm event, indicates a standby air dryer started up.
BACKUP RETURNED TO STANDBY	Indicates a standby/back-up air dryer was returned back to standby status.
TAKEN OUT-OF-SERVICE	Air dryer removed from ATS control.
RETURNED TO SERVICE	Air dryer returned to ATS control.
PHONE LIST MODIFIED ; PRIOR LOGINS MAY BE INVALID	Indicates a change to the telephone list/password list.
COMMUNICATIONS LOST	Communications between the ATS and the IUC has been interrupted.
COMMUNICATIONS RESTORED	Communications has been restored between the ATS and the IUC.
FAILS TO RUN WHEN COMMANDED	Indicates the ATS lost communications to the IUC while air dryer was being commanded.
RUNS NOW WHEN COMMANDED	Indicates the ATS reestablished communications with the IUC and air dryer responds properly.
ALL-COMPRESSOR POWER FAIL?	Indicates all air dryers lost power simultaneously, while ATS remained powered-up.
COMPRESSORS ON-LINE AGAIN	Indicates power being restored to the air dryers, following "ALL-COMPRESSORS POWER FAIL" event.
ALARMS RESET (REMOTE)	Alarm resetting through remote communications using WinCAM software.
ALARMS RESET (LOCAL)	Alarm resetting through toggling of IUC switch at office.
PROGRAM MODE: INACTIVE COUNT FROM %d TO %d	Change number of standby units in auto-rotation mode.
PROGRAM MODE: ROSTER CONTENTS CHANGED	Indicates program change in row roster mode.

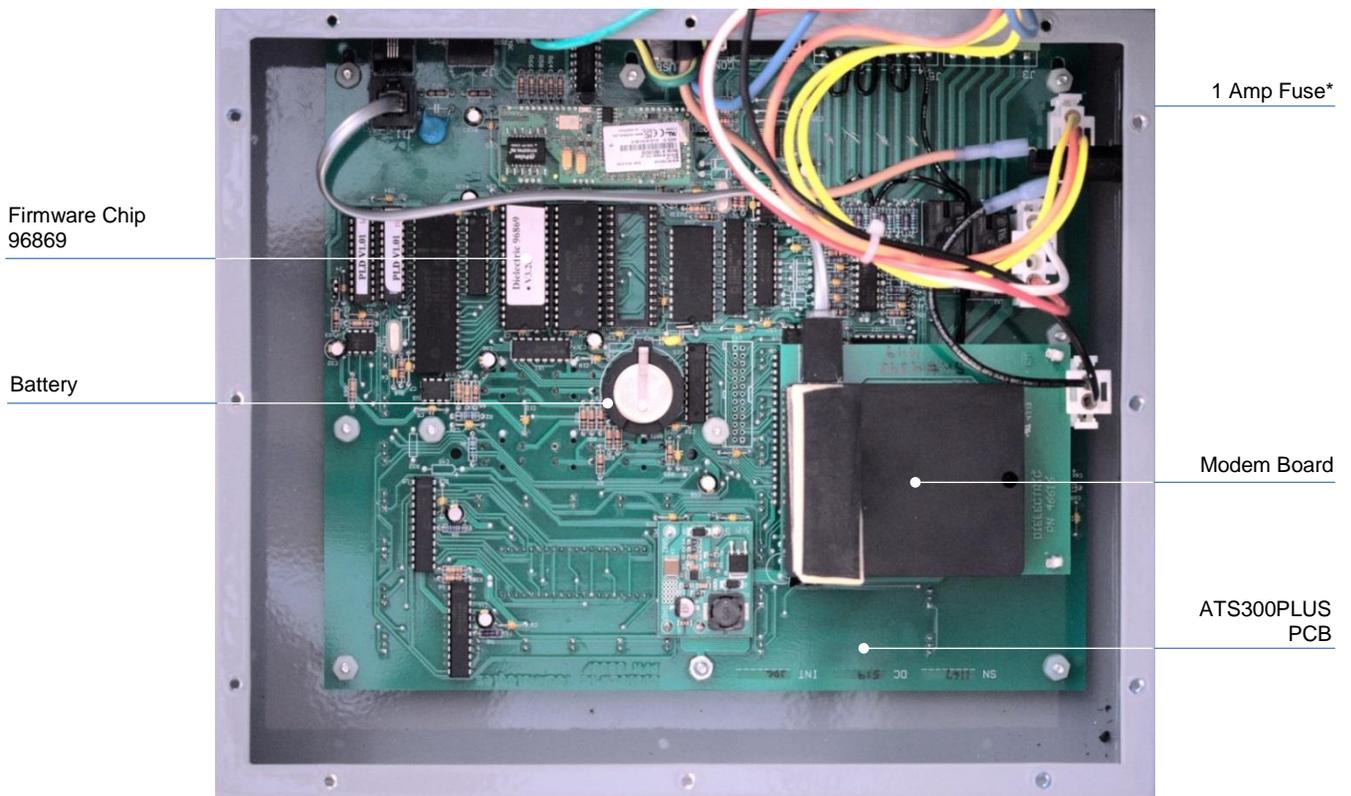
PROGRAM MODE: TRANSFER DAYS CHANGED	Indicates change to day(s) of transfer.
PROGRAM MODE: TRANSFER TIME CHANGED	Indicates change to time of transfer.
AUTOMATIC TRANSFER: FROM ROSTER x TO x	Indicates automatic transfer from roster x to roster x.
AUTOMATIC TRANSFER: AUTO-ROTATE @ UNIT x	Indicates unit x transferred automatically to on-line status.
MANUAL TRANSFER: FROM ROSTER x TO x	Indicates manual transfer from roster x to roster x.
LOGIN (****):-----	Indicates remote log-on and identifies password/user.
LOGIN: LOCAL CONNECTION----- -----	Indicates a back-to-back modem link.
----LOGOUT: LOST COMMUNICATIONS	Indicates a communications interruption between the two modems.
-----LOGOUT	Indicates a sign-off to the ATS.

Section 18 - ORDERING MENU / SPARE PARTS

ATS300PLUS CONTROLLER MENU			
(C) ATS300PLUS with Communications Package			
ORDERING P/N	MODEL	Software	CAPABILITIES
46632P	ATS-308C	WinCAM	2 - 8 Dryers
ORDERING P/N	MODEL	Use	DESCRIPTION
47784	Standard (SE,ME)	Dielectric SE/ME's	1 - SE Interface
58235	ATS-304	All Other Dryers	1 - 120V Dryer
54258	ATS-305	All Other Dryers	1 - 220V Dryer
ATS300PLUS CABLE OPTION MENU			
One (1) Per Air Dryer			
ORDERING P/N	MODEL		DESCRIPTION
47450	12' Cable		1 - Cable
47451	25' Cable		1 - Cable
47452	50' Cable		1 - Cable
ATS300PLUS COMMUNICATIONS OPTION			
ORDERING P/N	MODEL	DESCRIPTION	
70356	Disk - WinCAM	WinCAM Software for Windows	
62588	Mounting Bracket	Rack Mount	
ATS300PLUS SPARE PARTS			
ORDERING P/N	DESCRIPTION		
105204	ATS300PLUS PCB		
46614	Power Unit (DC Power Supply)		
46615	Transformer (24 VAC)		
46616	Modem Board		
96869	Firmware Chip		
46619	IUC MODULE (Black Box on IUC Panel)		

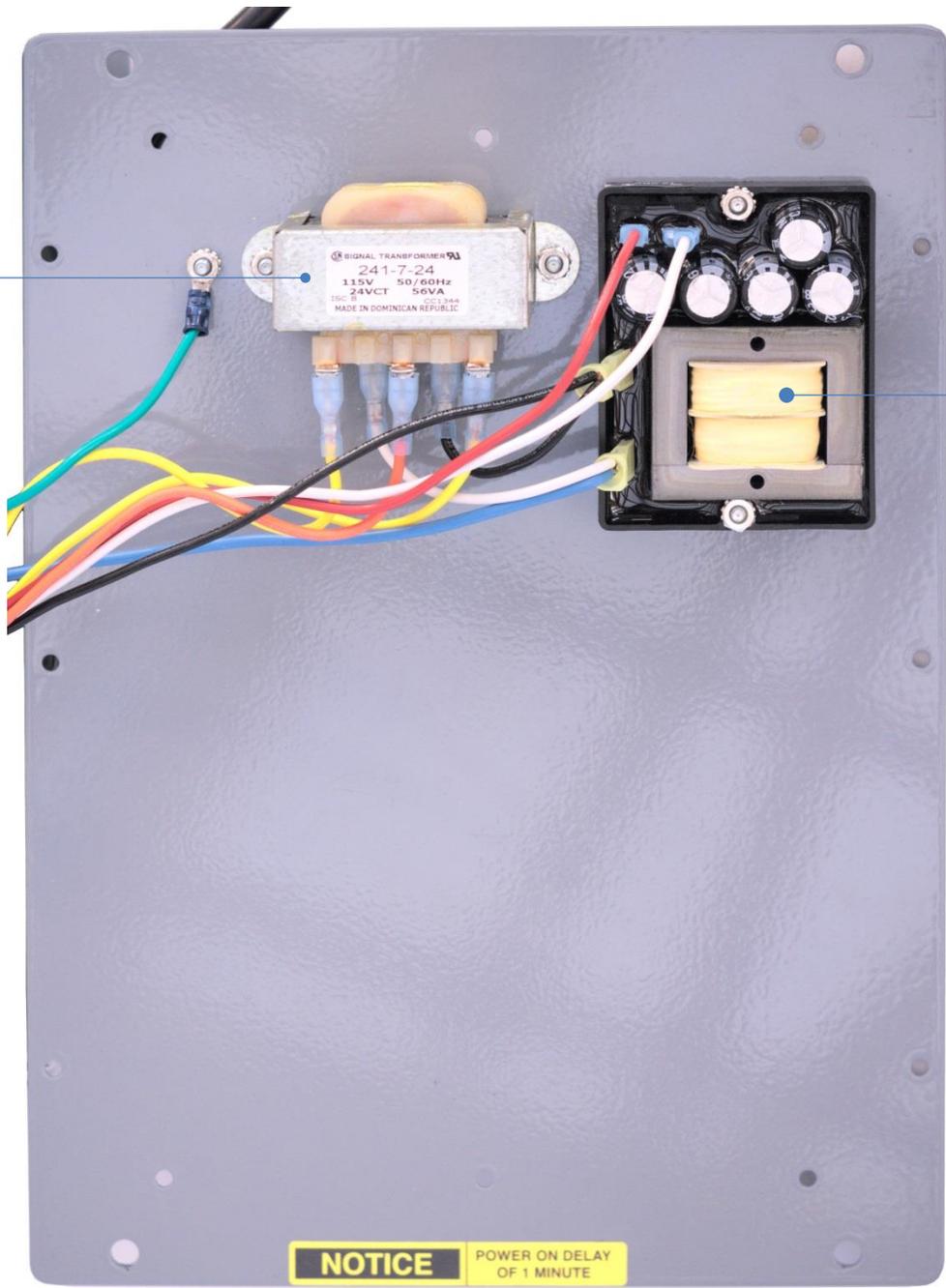
ATS300PLUS SPARE PARTS (cont.)	
56333	Surge protector for power and phone
64904	Battery 3V lithium
54567	Fuse 1 amp slow blow

18.1 COMPONENT IDENTIFICATION



* Fuse holder in side wall, not visible in this view

Transformer



12V Power Supply

Section 19 - ATS300PLUS UPGRADE INSTRUCTIONS

CONTROLLER

The ATS300PLUS System is designed to accept periodic updates regarding engineering changes, products improvements and feature enhancement. These enhancements most likely will require FIRMWARE replacement and SOFTWARE updating

19.1 FIRMWARE REPLACEMENT

To replace the FIRMWARE chip, first disconnect power to the ATS300PLUS system. The Air Dryers that are operating at the time of power disconnection will continue operating. Remove the unit from the wall and carefully remove the back mounting plate. Note that there is cabling attached so flip the plate and lay it next to the enclosure. Proceed to the CAM motherboard and locate the FIRMWARE chip. Its white label identifies the chip. Note the version. All PLUS versions use 3.xx only where xx is updates

NOTE: DO NOT use version 3.xx Firmware in non PLUS versions of the ATS300. These older ATS units used version 2.xx only.

19.2 CHIP REMOVAL / REINSERTION

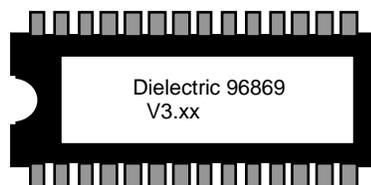
NOTE: It is important NOT to use ANY tools with MAGNETIC TIPS.

Following power disconnection, gently pry the older version chip from its socket, prying from both ends of the chip. Note the orientation of the groove in one end of the chip. Carefully place the new replacement chip on the socket with the same alignment and make certain that all pins are properly aligned with the chip socket before pressing into position. When you are sure the chip is properly aligned with the socket, press firmly into position. Do not use excessive force when inserting the chip.

CAUTION!: ALL CHIP PINS must be properly inserted into the socket before power is reapplied. Otherwise data corruption to the non-volatile RAM may occur

Reapply power. Upgrade is complete. Any questions please contact Dielectric Pressurization Systems at 1-877-AIR DRYR (247-3797).

NOTE: If Power up of the ATS does not occur after the 1 minute delay, unplug the ATS and pull the chip and check that none of the pins have rolled under



WARRANTY

The Manufacturer warrants that all goods supplied hereunder, whether or not of its own manufacture, will be of the kind described herein or in any specification and drawing approved by the Manufacturer and free from defects in material or workmanship under normal use and prescribed maintenance for a period of one (1) year, with the exception of air dryers utilizing water sealed compressors as well as the compressors themselves which shall be for two (2) years. Neither this warranty nor any other, expressed or implied, shall apply to goods delivered hereunder which have been damaged or subjected to alteration or negligence after delivery. The Manufacturer's only obligation for breach of this warranty shall be the repair, without charge, or the furnishing EX Works Raymond Maine, of a similar part to replace any part which within one (1) year, with the exception as noted above, from date of shipment is proven to have been defective, provided that (i) the Purchaser shall have notified the Manufacturer within ten (10) days of the discovery of such defect and not later than ten (10) days after the last day of this warranty, and (ii) the Manufacturer shall have the option of requiring the return of the defective material (transportation prepaid) to establish the claim. The Manufacturer shall not in any event be liable for the Purchaser's manufacturing costs, loss of profits, good will or any other special, consequential, incidental, or other damages resulting from such defects. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE WARRANTY SET FORTH HEREIN.

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