System Studies Incorporated

Small Office Monitoring Kit

Offering High-Performance, Low-Cost Monitoring for Small Central Offices

Central office air pressure system monitoring is an important step in helping to maintain adequate cable pressure protection. Problem is, most cable pressurization monitors are designed for air pressure systems with a large number of transducers and multiple pipe and distribution panels in the central office.

Until recently, choices were limited for small offices: either pay generously for over-capacity, rely on discontinued legacy equipment, such as a System Studies Dial-a-Ducer™, or go without monitoring at all. None of these options makes sense for companies looking to improve existing monitoring or initiate new cost-effective cable pressure system monitoring in their small, lower-capacity offices.

The Small Office Monitoring Kit offered by System Studies solves this dilemma. It provides the perfect monitor for the job, the uM260 Micro Monitor™, as well as the necessary components and fittings to place the system in operation. Two kits are offered: one for offices where a Dial-a-Ducer monitoring device is being replaced, and the other for previously unmonitored small offices.

The primary kit component, the uM260 Monitor, is a compact, light-weight unit that provides monitoring for up to four binary devices and 16 pressure and flow transducers. It measures 9.25 in wide x 5.14 in deep x 1.25 in high and can be mounted in a standard equipment rack*, secured to a wall, or placed on a suitable horizontal surface.

Unlike other cable pressurization system monitors, which require bulky termination blocks and cables to connect monitoring device pairs, the uM260 utilizes a direct plug-in Termination Adapter. This adapter and the Flow Finder™ and High Resolution Dual Transducer™ required to monitor delivery pressure and total air flow at the office's distribution panel are supplied in the kit. Also included are the necessary fittings, clamps and pneumatic tubing.

* Requires separate Rack Mount Panel Kit (Part No. 9900-0260).

System Studies Incorporated

2-1340 East Cliff Drive
Santa Cruz, CA 95062
(831) 475-5777
(800) 247-8255
(831) 475-9207 FAX
www.airtalk.com

Monitored Devices

In its most basic configuration, as shown in the illustrations on the center pages, the kit's uM260 provides remote monitoring and alarming for the office air dryer, and for the supplied High Resolution Dual Transducer's flow sensor and pressure sensor. The three conductor pairs used for these devices need to be connected to the Termination Adapter as shown in the enlarged wiring schematic drawing (back page). If, at a later date, additional binary and/or analog devices need to be monitored, they can be connected to the remaining terminals on the adapter following the printed numbering sequence.

Phone / LAN Communications

Please note that the kit does not include either a phone line or an Ethernet cable. If you are installing the LAN version of the uM260, please order the LAN drop in the CO well in advance of your intended installation date. It could take several weeks for the IT personnel to arrange for the LAN connection. Conversely, arranging for dial tone for a modem version of the uM260 may only take a day or so. In either case, you will need to plan your installation so that the required communications line is available.

Installation Examples

The Small Office Monitoring Kit designed for a previously unmonitored office is available with either a modem version of the uM260 Monitor or a LAN version (page 2). In addition, two Flow Finder ranges are offered: 0–19.0 SCFH and 0–47.5 SCFH. The System Studies Part Numbers for the various options are listed below:

9900-6263 M-X	Small Office Monitoring Kit, uM260, Modem Version, Dual TD, 0–19 SCFH
9900-6263 M-Y	Small Office Monitoring Kit, uM260, Modem Version, Dual TD, 0–47.5 SCFH
9900-6263 L-X	Small Office Monitoring Kit, uM260, LAN Version, Dual TD, 0–19 SCFH
9900-6263 L-Y	Small Office Monitoring Kit, uM260, LAN Version, Dual TD, 0–47.5 SCFH

M = Modem; L = LAN
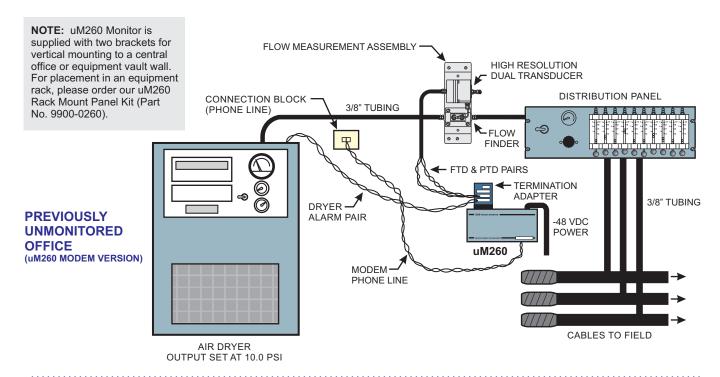X = 0-19 SCFH Flow Finder; Y = 0-47.5 SCFH Flow Finder
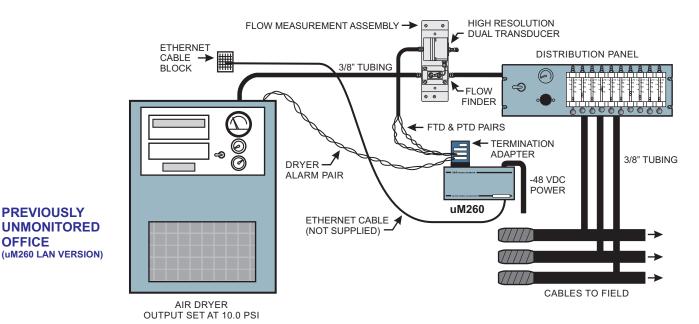
Unmonitored Office Installations

The illustrations below depict how the "M" (Modem) and "L" (LAN) versions of the kit would look installed in an office with a dryer feed to a distribution panel. Both options are relatively easy to install. Simply connect the equipment as shown, or in a manner that is appropriate for your particular installation, and refer to the Termination Adapter illustration (last page) below for information on how to wire the dryer alarm, pressure transducer and flow transducer pairs.

The *uM260 Micro Monitor Installation & Operations Manual* (supplied with the monitor) explains how to install and program the uM260. Please note that if you intend to have PressureMAP™ monitor the office, you can perform the required data entry in Pressure-MAP and then upload the data to the uM260. You will also need to obtain a PressureMAP Office License for the new installation. Please contact your Surveillance Center or System Studies Technical Support for information about this requirement.

NOTE: uM260 Monitor is supplied with two brackets for vertical mounting to a central office or equipment vault wall. For placement in an equipment rack, please order our uM260 Rack Mount Panel Kit (Part No. 9900-0260).

FLOW MEASUREMENT ASSEMBLY
HIGH RESOLUTION DUAL TRANSDUCER
DISTRIBUTION PANEL
CONNECTION BLOCK (PHONE LINE)
3/8" TUBING
FLOW FINDER
FTD & PTD PAIRS
TERMINATION ADAPTER
3/8" TUBING
DRYER ALARM PAIR
-48 VDC POWER
uM260
MODEM PHONE LINE
CABLES TO FIELD

PREVIOUSLY UNMONITORED OFFICE
(uM260 MODEM VERSION)

AIR DRYER
OUTPUT SET AT 10.0 PSI

FLOW MEASUREMENT ASSEMBLY
HIGH RESOLUTION DUAL TRANSDUCER
DISTRIBUTION PANEL
ETHERNET CABLE BLOCK
3/8" TUBING
FLOW FINDER
FTD & PTD PAIRS
TERMINATION ADAPTER
3/8" TUBING
DRYER ALARM PAIR
-48 VDC POWER
uM260
ETHERNET CABLE (NOT SUPPLIED)
CABLES TO FIELD

PREVIOUSLY UNMONITORED OFFICE
(uM260 LAN VERSION)

AIR DRYER
OUTPUT SET AT 10.0 PSI

Dial-a-Ducer Replacement Installation

There are two versions of the Small Office Monitoring Kit designed for an office that is currently being monitored by a System Studies Dial-a-Ducer:

9900-6265M   Small Office Monitoring Kit, uM260, Modem Version, Dual TD

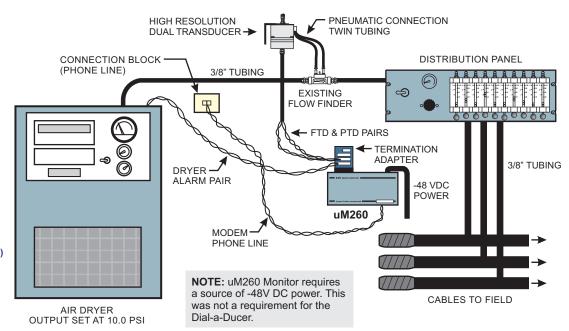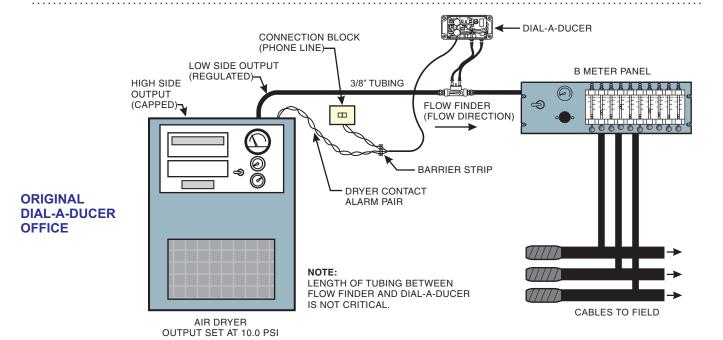**9900-6265L**   Small Office Monitoring Kit, uM260, LAN Version, Dual TD

Please note that the kit designed for a Dial-a-Ducer replacement does not include a Flow Finder. The existing Flow Finder can be used unless a different flow range is desired. If this is the case, the new Flow Finder will need to be ordered separately.

More in-depth installation and setup instructions are provided with the uM260 Micro Monitor. Additional information can be obtained, if needed, from the System Studies Technical Support Department.

NOTE: uM260 Monitor is supplied with two brackets for vertical mounting to a central office or equipment vault wall. For placement in an equipment rack, please order our uM260 Rack Mount Panel Kit (Part No. 9900-0260).

HIGH RESOLUTION DUAL TRANSDUCER
PNEUMATIC CONNECTION TWIN TUBING
DISTRIBUTION PANEL
CONNECTION BLOCK (PHONE LINE)
3/8" TUBING
EXISTING FLOW FINDER
FTD & PTD PAIRS
TERMINATION ADAPTER
3/8" TUBING
DRYER ALARM PAIR
-48 VDC POWER
uM260

uM260 MICRO REPLACEMENT
(uM260 MODEM VERSION)

MODEM PHONE LINE

NOTE: uM260 Monitor requires a source of -48V DC power. This was not a requirement for the Dial-a-Ducer.

CABLES TO FIELD

AIR DRYER OUTPUT SET AT 10.0 PSI

DIAL-A-DUCER
CONNECTION BLOCK (PHONE LINE)
B METER PANEL
LOW SIDE OUTPUT (REGULATED)
3/8" TUBING
HIGH SIDE OUTPUT (CAPPED)
FLOW FINDER (FLOW DIRECTION)
BARRIER STRIP
DRYER CONTACT ALARM PAIR

ORIGINAL DIAL-A-DUCER OFFICE

NOTE: LENGTH OF TUBING BETWEEN FLOW FINDER AND DIAL-A-DUCER IS NOT CRITICAL.

CABLES TO FIELD

AIR DRYER OUTPUT SET AT 10.0 PSI
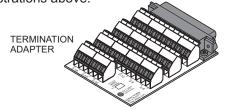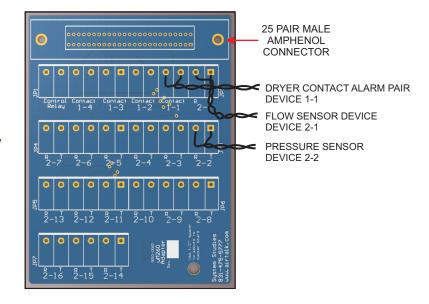
Wiring Schematic

The illustration below shows the required termination points for the dryer alarm, the flow transducer and the pressure transducer. Notice that the device numbers are printed on the adapter to identify the expected wiring sequence.

Device Information for Data Entry

The following table contains device numbering information for the uM260 and PressureMAP. It depicts the type of monitoring illustrated in the kit installation illustrations above.

TERMINATION ADAPTER

25 PAIR MALE AMPHENOL CONNECTOR

DRYER CONTACT ALARM PAIR DEVICE 1-1

FLOW SENSOR DEVICE DEVICE 2-1

PRESSURE SENSOR DEVICE 2-2

Application	PressureMAP Device Type	uM260 Device	PressureMAP Device/Access Number
Dryer Contact Alarm	CA	1-1	001-01
Distribution Panel Flow Transducer	DF	2-1	002-01
Distribution Panel Pressure Transducer	DP	2-2	002-02

PressureMAP Office and Data Modifications for Dial-a-Ducer Replacement Installation

■ Change Monitor Type designation in Office Editor from DAD to uM260.

■ Change Dial-a-Ducer Transducer Types in Specific Device Information Editor to uM260 Transducer Types

  ● Pressure Transducer - new designation: CPA/30.0 (Dial-a-Ducer TD Type was DP/15.0)

  ● Flow Transducer - new designation: CF/19.0 or CF/47.5 (Dial-a-Ducer equivalent was DF/19.0 or DF/47.5).

■ Contact your Surveillance Center or System Studies Technical Support to determine the need for a PressureMAP Office License for the new uM260 monitored office. An Office License needs to obtained before PressureMAP can begin device polling and alarm distribution for the new monitor. This requirement applies to both previously unmonitored offices and Dial-a-Ducer replacement installations.

System Studies Incorporated

2-1340 East Cliff Drive
Santa Cruz, CA 95062
(831) 475-5777
(800) 247-8255
(831) 475-9207 FAX
www.airtalk.com

3940612.AHD