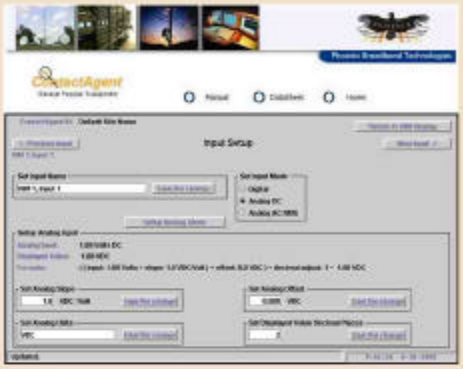
ContactAgent™

Modular Remote Monitoring System

Control your world.

Introducing the *ContactAgent* "Point-Of-Use" Modular Monitoring Solution



System descripton

ContactAgent is a modular, "point-of-use" remote monitoring and control system. The system consists of the *ContactAgent* Master Unit, plus RIM (Remote Input Module) and ROM (Remote Output Module) remote expansion modules. The *ContactAgent* Master Unit has built-in capability to monitor up to 8 digital contact-closure inputs, plus the ability to control 2 contact-closure outputs. The capability of the Master Unit can be easily expanded through the use of RIM and ROM slave modules placed at the point of use and connected to the Master Unit with common CAT-5 ethernet cabling. All communications between master and slave units , including operating power for the slave units, is passed over this single interconnection "daisy-chain', greatly simplifying the wiring task.

Each of up to 4 additional RIM modules adds 6 additional monitored inputs to the system, plus local AC utility power monitoring and point-of-use temperature and humidity (option). Each RIM input can be programmed to respond to contact-closures or it can measure analog voltages. When programmed as analog monitoring points, each input has a DC measurement range of +/- 12VDC with accuracy of +/- 2% and measurement resolution of 25mV. A special RMS analog mode allows an input to measure 50-60Hz AC voltages of arbitrary waveform.

Each of up to 4 additional ROM modules adds 4 additional remotely controllable Form-C relay contacts. The relays are mechanically latched, so they maintain their state during a system power loss. The ROM also contains point-of-use temperature and humidity (option) sensors.

The *ContactAgent* system is fully programmable and remotely operable, via either the built-in web pages or via its industry-standard SNMP interface. All inputs can be individually configured to generate alarms under user-defined conditions, and an email client can be configured to send alarm messages to up to 3 e-mail addresses.

Point-of-use architecture

ContactAgent's modular, expandable architecture lets you place measurement modules close to the devices that they monitor or control, simplifying wiring, minimizing false triggering from local noise sources and optimizing the reliability of the installation.

Ethernet

Master Unit:
- 8 contact (digital) inputs
- 2 Form-C relay outputs
- TCP/IP, SNMP
- Built-in web pages
- E-mail client

CAT-5 jumper daisy-chain

Up to 8 modules total

RIM Module:
- 6 digital/analog inputs
  - Input mode user-definable
  - Analog mode supports DC or RMS measurement
  - Programmable analog alarm thresholds
  - Programmable digital input threshold
- Built-in temperature sensor; humidity optional
- Local utility AC monitoring (sensor supplied)

ROM Module:
- 4 Form-C latching relay outputs
  - State is maintained during loss of power
- Built-in temperature sensor; humidity optional
- Local utility AC monitoring (sensor supplied)

Web-Based Configuration & Control...
ContactAgent's built-in web server allows you to configure all monitoring modes and alarm thresholds easily and intuitively. Digital (contact) inputs can be individually set up to make alarms on state-changes, and the 'normal' and 'alarm' states can be user-defined. Analog inputs can be bracketed by alarm thresholds.

User-defined Analog Scaling...
Each analog input can have individual user-defined scale factors applied. Thus, an input that varies from say, 10-12VDC, can be made to display in user-defined scaleable units, such as "5.7-9.5 dB".

Fail-Safe Relay Outputs...
The ROM module's controllable Form-C relay output contacts are mechanically latched, which means that the contact state will not change during a loss of system power.

SNMP Interface...
ContactAgent's industry-standard SNMP interface gives you complete control to monitor and manage installations and equipment without locking you into proprietary software. Most SNMP compliant manager software can easily be made to work with *ContactAgent*.

Phoenix ContactAgent

Features

- Expandable remote monitoring & control
- Works via LANs, WANs and Internet
- Very comprehensive web-based user interface
- Industry-standard SNMP interface
- E-mail system sends alarms
- Expandable input-output structure
- Contact-closure or analog inputs
- Latched relay contact outputs
- Temperature and humidity measurements

Applications

- Cable TV headends
- Cell sites & hubs
- Industrial installations
- Facilities monitoring
- Equipment monitoring
- Remote control
- Residential monitoring
- AC power line sensor

Master Unit

Number Inputs:	8 digital (contact closure)
Input Electrical:	1 ma max closed-switch current
Number Outputs:	2 Form-C contact sets; state not preserved on power failure
Output Electrical:	60V max; 5A
Slave Unit Interface:	RS-485/RJ-45 connector
Operating Power:	5VDC from supplied wall-mount power supply
Network Interface:	10/100 ethernet
Protocols*:	TCP/IP; SNMP; HTTP; SMTP; DHCP; TFTP
Size:	8"W x 4.25"D x 1.5"H (rack-mountable)

* SNMP MIB documentation available on request

RIM Module

Number Inputs:	6 digital/analog (user-definable)
Analog Measurements:	+/-12VDC; 0-8 VRMS
Temperature Sensor:	Standard; +/- 2 deg C accuracy from -40 deg C to +80 deg C
Humidity Sensor:	Optional; +/- 3 % accuracy from 20% RH to 80% RH +/-5 % accuracy from 0-19% RH and 81-100% RH
Max # Units:	4 RIM modules per Master Unit
Interface to Master:	RS-485 on RJ-45 connector; power supplied via daisy chain
AC Line Measurement:	Optional; 90 to 140 VAC, RMS, sine, 50/60Hz

ROM Module

Number of Outputs:	4 Form-C contacts; state preserved on power failure
Output Electrical:	60V max; 2A
Temperature Sensor:	Standard; +/- 2 deg C accuracy from -40 deg C to +80 deg C
Humidity Sensor:	Optional; +/- 3 % accuracy from 20% RH to 80% RH +/-5 % accuracy from 0-19% RH and 81-100% RH
Max # Units:	4 ROM modules per Master Unit
Interface to Master:	RS-485 on RJ-45 connector; power supplied via daisy chain

Accessories

Rack-mount Bracket (RK-1)

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