sierra monitor corporation

Sentry Printer Option

The Sentry Printer Option aids in management of your gas risk with the ability to print a variety of complete reports.

Sentry's preformatted reports provide critical information for analyzing gas exposure and evaluating system reliability. Report selection criteria are user definable. These reports:

- Help user make better decisions during a gas leak
- Provide history to analyze all exposure events
- Substantiate due diligence in complying with regulations
- Confirm the reliability of the system.

With optional Sentry printer software, preformatted reports can be printed via the RS232 port on the Sentry connector panel. Output is either directly from one controller to a printer or, via the Sentry Master and Subordinate network system, from several controllers to one printer.

STATUS REPORT

Status Reports show a snapshot of the gas concentration and alarms. The reporting interval is user programmable from 1 hour to 7 days. The first line indicates the controller ID and date/time. The second line indicates the sensor number and alarm condition ("L" for low alarm and "H" for high alarm). The third line indicates the current concentration and the fourth line indicates the gas type.

```
 ---------------------------------
            <STATUS  REPORT>
ID:A STATUS = 01 HOUR 12/17 15:00
1    2    3    4    5    6    7    8
03   04   20.9 20.9 08   08   18   19
H2S COMB OXY  OXY  COMB COMB COMB COMB

 ---------------------------------
            <STATUS  REPORT>
ID:A STATUS = 01 HOUR 12/17 16:00
1L   2    3    4    5    6    7    8
03   04   20.9 20.9 08   09   08   08
H2S COMB OXY  OXY  COMB COMB COMB COMB

 ---------------------------------
            <STATUS  REPORT>
ID:A STATUS = 01 HOUR 12/17 17:00
1    2    3    4    5    6    7    8
13   04   20.9 20.9 08   09   22   19
H2S COMB OXY  OXY  COMB COMB COMB COMB

 ---------------------------------------
<STATUS  REPORT>
ID:A STATUS = 01 HOUR 12/17 18:00
1H   2    3L   4    5    6    7L   8
23   04   19.5 20.9 08   06   40   19
H2S  COMB OXY  OXY COMB COMB COMB COMB
 ---------------------------------
```

Printer (5301-10)

The Sentry Printer is a modern, high-speed, quiet, ultra compact, state-of-the-art printer that can operate as either a serial or parallel output printer. This printer utilizes thermal paper and thus no ink! It has minimal moving parts, easy maintenance with self-diagnostics, and easy paper loading with a clamshell design. Standard power for the 5301-10 is 12-24 VDC. An optional power supply is available to enable an operator to use 120VAC power..

5301-10	Serial/Parallel Compact Printer
SPL69207	120V Power Supply
SPL69205	Thermal Paper for Compact Printer

SYSTEM REPORT

The System Report lists all the system parameters including the software configuration of the system, calibration configuration, printer configuration and configuration for each module: on/off condition, calibration status, relay latching configuration, alarm levels, module type, the controller channel to which it is connected, and calibration conditions and factors.

```
 <SYSTEM  REPORT>
ID:A   USER # = 1   12/17   15:08

M5000 VER:4.19
PN 8C

CALIBRATION CONFIGURATION:
LC: OFF     CAL FREQ= 90  DAYS
H2S = 20    CAL DUE = 88  DAYS
COMB= 60    CAL DUE = 89  DAYS <SEL>

PRINTER CONFIGURATION:
PRINTER: ON  STATUS = 07 DAYS HIST:YES
H2S : MIN. CONC. = 05   CHANGE = 03
COMB: MIN. CONC. = 08   CHANGE = 13

MODULE CONFIGURATION :
MODULE 1 IS ON   H2S  CHANNEL=1
 LA= 10 NLATCH  HA= 20  LATCH
 FACTOR(S)=   100   150   200
```

DIAGNOSTIC REPORT

The Diagnostic Report lists the critical voltage conditions for each module and can be selected to print periodically at intervals from 1 to 90 minutes.

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Web Site: http://www.sierramonitor.com E-Mail: sales@sierramonitor.com

KEY EVENT REPORT

When any module reading exceeds a preset minimum level an Event Report is generated. After the sensor is above the minimum level, any change greater than a preset change concentration will cause another Event Report to print. The Event Report prints all module numbers and their present reading. This concise record provides information for better decision-making before an alarm level is reached.

```
----------------------------------------
ID:A  <KEY EVENT REPORT>    12/17 14:27
1    2    3    4    5    6    7    8
05   03   23   29   07   02   01   02

----------------------------------------
ID:A  <KEY EVENT REPORT>    12/17 14:35
1    2    3    4    5    6    7    8
07   03   23   25   08   02   01   02

----------------------------------------
ID:A  <KEY EVENT REPORT>    12/17 14:37
1L   2    3    4    5L   6    7    8
11   03   23   25   12   02   02   03

----------------------------------------
ID:A  <KEY EVENT REPORT>    12/17 14:40
1H   2    3    4    5L   6    7    8
21   04   23   24   12   03   09   02

----------------------------------------
ID:A  <KEY EVENT REPORT>    12/17 14:45
1H   2    3    4    5L   6    7L   8
35   04   22   24   13   03   20   02

----------------------------------------
ID:A  <KEY EVENT REPORT>    12/17 14:56
1H   2    3    4    5    6    7L   8
```

CALIBRATION REPORT

The Calibration Report prints automatically upon completion of calibration. The report indicates which gas type was calibrated, the gas concentration and the planned frequency of calibration. For each module the report lists the percent change during calibration, the peak concentration and the zero and span sensor voltages. Module sensitivity is also checked. Proper sensitivity requires that the voltage difference obtained in air (1st voltage) and with span gas (2nd voltage) is sufficient to get adequate resolution.

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - -
      <CALIBRATION REPORT>
ID:A USER # =0   12/18 10:03

GAS TYPE :         COMB
CALIB CONC=        60
CAL FREQ=          90 DAYS
GLOBAL CALIB:      OFF

>MODULE #      =     2
    % CHANGE       =     +01 %FS
    PEAK CONC.     =     61
    1ST VOLTAGE    =     +0.073
    2ND VOLTAGE    =     +0.810
>MODULE #      =     3
    % CHANGE       =     -15 %FS
    PEAK CONC.     =     45
    1ST VOLTAGE    =     +1.649
    2ND VOLTAGE    =     +1.395
>MODULE #      =     4
    LOW SENSIVITY
    % CHANGE       =     +01 %FS
    PEAK CONC.     =     61
    1ST VOLTAGE    =     +0.073
    2ND VOLTAGE    =     +0.816
```

HISTORY REPORT

The History Report lists the last time each significant event has occurred. This includes system power interruption, history reset, alarm and concentration information for each sensor, calibration time for each sensor and an error log. A History Report can be printed each time a programmed Status Report is printed. These records are useful in establishing the presence of gas during the period and documenting the company's due diligence in its gas monitoring efforts.

```
----------------------------------------
            <HISTORY REPORT>
ID:A       USER # =1         12/17 15:08

HISTORY RESET AT: 02/01  10:59
POWER DOWN AT:12/17  13:34
POWER UP   AT:12/17  13:44

MODULE  1   PPM H2S
 LOW  ALARM 12/13  05:07
 HIGH ALARM 12/17  15:07
LOWEST  CONC = 00  12/16  10:59
HIGHEST CONC = 23  12/17  15:07
LAST CALIBRATED :02/15  14:33

MODULE  2  %LEL COMB
 LOW  ALARM 12/10  12:08
 HIGH ALARM 00/00  00:00
LOWEST  CONC = 00  12/16  11:36
HIGHEST CONC = 45  12/10  12:35
LAST CALIBRATED :02/16  11:35

MODULE  3  %LEL COMB
 LOW  ALARM 12/10  11:57
 HIGH ALARM 12/10  12:20
LOWEST  CONC = 00  03/16  10:59
```

WARM START REPORT

At any time the system is warm started due to a power failure, a report is generated to show the system software configuration, the result of an internal diagnostic sequence and the power down and power up date and times.

SPECIFICATIONS for Printer 5301-10

PRINTING:	Direct Thermal
CHARACTERS per LINE:	16 cpi, 24 cpi, 32 cpi, 42 cpi
CHARACTER SIZE	9x24 dots, 12x24 dots, 16x24 dots, 24x24 dots
RESOLUTION	203 dpi, 8 dots/mm
PRINT WIDTH	2-inch (48 mm)
PRINTING SPEED	50 mm/sec
INTERFACES	
Sentry Controller	Serial RS232
Sentry Commander	Parallel
FieldServer	Serial RS232
DIMENSIONS	3.2 x 3.95 x 2.2 inches (80 x 75 x 55 mm)
PAPER	Thermal Roll 57 mm wide; 40 mm diameter, spproximately 20m long
POWER	12V-24V DC
OPERATIING TEMP.	32 - 113ºF (0-45ºC)

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