

## TECHNOVATION Analytical Instruments Pvt. Ltd

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# SERIES 2011 SINGLE-POINT STAND ALONE OR MULTI POINT ADDRESSABLE µP BASED GAS ANALYSER

#### SURVEILLANCE MADE EASY



#### THE INSTRUMENT

- The Instrument can be used as stand alone or as one of many in a multipoint addressable system with a common master panel.
- The sensor can be fitted on the instrument or at the end of a cable. The sensor can be located at the site to be monitored and the display unit in a safe area/instrumentation room.
- The Instruments are meant for continuous operation of area monitoring with continuous read out, plus vital status indicators.

#### **APPLICATIONS**

■ Used for continuous surveillance single point monitoring or multi point monitoring of gases, in work places or enclosed spaces. For process monitoring, environmental monitoring, in general industry, with connectivity to data logger.

#### **FEATURES**

- Types of sensors that can be installed are Electrochemical, NDIR, Pellistor, Thermal Conductivity, Semiconductor, Particulate, Pressure, Flow, 4-20mA or 0.4 2V transmiters.
- The instrument has an option of 4 seven segment displays or a 128 X 64 Graphic LCD display with a backlight.
- Each instrument can be programed with gas / parameter name, location and Instrument ID.
- Two Alarms audible and Visual along with acknowledge and reset buttons, both set points viewable from front face
- Alarms settable as manual OR auto-reset type (Latching OR Non-Latching)
- A Buzzer is provided for the audible alarm. This buzzer can be inhibited and will not be activated in alarm condition.
- There are 2 programmable alarm LED's for each sensor. Buzzer inhibit switch is provided.
- Two programmable NO, C, NC potential free relay contact are provided. One relay is activated with each alarm. Relay ratings are 220V AC, 1A, resistive load. Relay inhibit switch is provided.
- Either 0 1V or 0.4 2V or 0 5V and 4 20mA recorder outputs are provided. This recorder output can be taken to an external data logger or display.
- A RS485 / Ethernet / USB via binary Modbus is provided for programming the instrument and transmitting data to master control panel or internet access by remote computer worldwide or a data logger.
- Supply to the instrument is either 110 240 V AC 50 Hz or 24 VDC.
- A selection of instrument mounting are either wall or Panel mounted.
- A selection of either ABS Plastic or Aluminum is available for the instrument enclosure.
- Status indicators for Alarm, Alarm Acknowledge, Buzzer Inhibit, Relay Inhibit & Confidence flash



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# **SR2011 PRODUCT CODING**

FOR ordering the SR2011details of different options are mentioned below.

SR2011/ Display Z / Supply Y / Gas / Parameter XX / Range WW / Resolution V / Units UU / Communication T / Current Output S /Voltage output R /Enclosure Q / Sensor Mounting P.

EXAMPLE: An instrument with the following specifications Display Type: LCD, Supply Voltage: 230V AC, Gas: Hydrogen, Range: 2000 ppm, Resolution: 0001 ppm, Units: ppm, Communication: No Communication, Current Output: 4 – 20mA, Voltage Output: 0 – 1V, Enclosure: Aluminum Panel Mounted, Sensor Mounting: On Cable Will have a designation as below.

#### SR2011/2/1/04/01/1/02/0/1/1/4/2

| Display Type         | Z  |
|----------------------|----|
| LED                  | 1  |
| LCD Graphic          | 2  |
|                      |    |
| Supply Voltage       | Υ  |
| 110 - 240 VAC, 50 Hz | 1  |
| 24 V DC              | 2  |
| Gas / Parameter      | XX |
| Oxygen               | 01 |
| Carbon Monoxide      | 02 |
| Sulphur Dioxide      | 03 |
| Hydrogen             | 03 |
| Hydrogen Sulphide    | 05 |
| Hydrogen Chloride    | 06 |
| Hydrogen Bromide     | 07 |
| Hydrogen Floride     | 08 |
| Hydrogen Cynide      | 09 |
| Nitrogen Dioxide     | 10 |
| Nitric Oxide         | 11 |
| Ozone                | 12 |
| Chlorine             | 13 |
| Bromine              | 14 |
| Flourine             | 15 |
| Ammonia              | 16 |
| Phosphine            | 17 |
| Formalhyde           | 18 |
| Phosgene             | 19 |
| Hydrazine            | 20 |
| Arsine               | 21 |
| Ethylene Oxide       | 22 |
| Mercaptan            | 23 |
| Silane               | 24 |
| Germane              | 25 |
| Tetrahydrothiophene  | 26 |
| Methane              | 27 |
| Propane              | 28 |
| N-Butane             | 29 |
| N-Hexane             | 30 |
| Methanol             | 31 |
| Ethnol               | 32 |

| Observans  |  |
|--|--|
| Chexane  | 33   |
| Iso-Propyl Alcohol   | 34   |
| Acetone  | 35   |
| Methyle Ethyle Ketone  | 36   |
| Tolune   | 37   |
| LPG  | 38   |
| Leaded Petrol  | 39   |
| Unleaded Petrol  | 40   |
| Carbon Dioxide   | 41   |
| Nitrous Oxide  | 42   |
| Hydrocarbons   | 43   |
| V. Organic Compound  | 44   |
| Freon / Halon  | 45   |
| Temperature  | 46   |
| Opacity  | 47   |
| Pressure   | 48   |
| Flow   | 49   |
| Dew Point  | 50   |
|  |  |
| Range  | ww   |
|  | 1 1  |
| 0 to 2000  | 01   |
| 0 to 1000  | 02   |
|  | 02<br>03   |
| 0 to 1000  | 02   |
| 0 to 1000<br>0 to 800<br>0 to 200<br>0 to 100  | 02<br>03<br>04<br>05   |
| 0 to 1000<br>0 to 800<br>0 to 200<br>0 to 100<br>0 to 50   | 02<br>03<br>04   |
| 0 to 1000<br>0 to 800<br>0 to 200<br>0 to 100<br>0 to 50<br>0 to 25  | 02<br>03<br>04<br>05<br>06<br>07   |
| 0 to 1000<br>0 to 800<br>0 to 200<br>0 to 100<br>0 to 50<br>0 to 25<br>0 to 20                                   | 02<br>03<br>04<br>05<br>06<br>07<br>08   |
| 0 to 1000<br>0 to 800<br>0 to 200<br>0 to 100<br>0 to 50<br>0 to 25<br>0 to 20<br>0 to 10                        | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09   |
| 0 to 1000<br>0 to 800<br>0 to 200<br>0 to 100<br>0 to 50<br>0 to 25<br>0 to 20<br>0 to 10<br>0 to 5              | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09   |
| 0 to 1000<br>0 to 800<br>0 to 200<br>0 to 100<br>0 to 50<br>0 to 25<br>0 to 20<br>0 to 10                        | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09   |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 10                              | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10                                       |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 1  Resolution                   | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11                                 |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 10 Fesolution                   | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11                                 |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 10  Resolution 0001             | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11                                 |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 1   Resolution  000.1 00.01     | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11                                 |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 10  Resolution 0001             | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11                                 |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 10  Resolution 0001 000.1 0.001 | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11<br><b>V</b><br>1<br>2<br>3<br>4 |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 10  Resolution 0001 000.1 0.001 | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11<br><b>V</b><br>1<br>2<br>3<br>4 |
| 0 to 1000 0 to 800 0 to 200 0 to 100 0 to 50 0 to 25 0 to 20 0 to 10 0 to 5 0 to 10  Resolution 0001 000.1 0.001 | 02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11<br><b>V</b><br>1<br>2<br>3<br>4 |

| LEL                 | 03 |
|---------------------|----|
| g/m                 | 04 |
| °C                  | 05 |
| V                   | 06 |
| mV                  | 07 |
| A                   | 08 |
| mA                  | 09 |
| fpm                 | 10 |
| g                   | 11 |
| kg                  | 12 |
| mbar                | 13 |
| bar                 | 14 |
| kPa                 | 15 |
|                     |    |
| Communication       | Т  |
| No Communication    | 0  |
| RS485               | 1  |
| RS485 Isolated      | 2  |
| RS232               | 3  |
| Ethernet            | 4  |
| USB                 | 5  |
| WiFi                | 6  |
|                     |    |
| Current Output      | S  |
| 4 - 20 mA           | 1  |
| V !: 0 : .          |    |
| Voltage Output      | R  |
| 0 - 1 V             | 1  |
| 0.4 - 2 V           | 2  |
| 0 - 5 V             | 3  |
| Enclosure           | Q  |
| Wall Mounted (ABS)  | 1  |
| Panel Mounted (ABS) | 2  |
| Alumunum Wall       |    |
| Mounted             | 3  |
| Aluminum Panel      |    |
| Mounted             | 4  |
|                     |    |
| Sensor Mounting     | Р  |
| On Instrument       | 1  |
| On Cable            | 2  |