

| Register Address | Register Address | Data Description | R/W | Length | Units | Valid Response |
|-------------------|------------------|------------------------|-----|--------|------------------|---|
| Radio Data | | | | | | |
| 1 | 1 | Reading | R | 2 | FLOAT | Any valid sensor reading |
| 3 | 3 | ModBus Address | R | 1 | Unsigned INTEGER | 0 – 247 |
| 4 | 4 | Gas Type | R | 1 | ENUM | 1 – 127, See Below |
| 5 | 5 | Unit Type | R | 1 | ENUM | 1 – 2, See Below |
| 6 | 6 | Revision Major | R | 1 | Unsigned INTEGER | 0-100 |
| 7 | 7 | Revision Minor | R | 1 | Unsigned INTEGER | 0-9 |
| 8 | 8 | Mode of Sensor | R | 1 | ENUM | 0 – 7, See Below |
| 9 | 9 | Voltage reading | R | 2 | FLOAT | 12V – 35V |
| B | 11 | Fault | R | 1 | ENUM | 0 – 15, See Below |
| C | 12 | Sensor Type | R | 1 | ENUM | 0 – 31, See Below |
| D | 13 | Radio Address | R | 1 | INTEGER | 1 – 255, -1 means no radio |
| E | 14 | Relay1 Settings | R | 2 | FLOAT | 1 – 32000, -1 means no relay1 |
| 10 | 16 | Relay2 Settings | R | 2 | FLOAT | 1 – 32000, -1 means no relay2 |
| 12 | 18 | Background if not O2 | R | 2 | FLOAT | 0.01(limited by precision) – 10% full scale. -1 means no radio |
| 12 | 18 | Background High if O2 | R | 2 | FLOAT | 16 – 24, -1 means no radio |
| 14 | 20 | Background Low if O2 | R | 2 | FLOAT | 16 – 24, -1 means no radio |
| 16 | 22 | Precision | R | 1 | INTEGER | 0-3 |
| 17 | 23 | Relay Settings | R | 1 | 8 BITS | Each bit = a setting, see below. |
| 18 | 24 | Last Time Null | R | 1 | Unsigned INTEGER | 0-60000. Number of days since last Null. 60000 or above means null is at factory default (never). |
| 19 | 25 | Auto-Cal Yes/No | R | 1 | INTEGER | 0 is for manual, 1 is for auto cal. |
| 1A | 26 | Cal Value for Auto-Cal | R | 2 | Float | Any valid number above the lowest decimal and below the scale of the |
| 1C | 28 | Last Time Cal | R | 1 | Unsigned INTEGER | 0-60000. Number of days since last Cal. 60000 or above means cal is at factory default (never). |
| 1D | 29 | Not used | R | 1 | INTEGER | 0 |
| 1E | 30 | Relay 1 State | R | 1 | INTEGER | 0,1 0 means inactive, 1 means active. |
| 1F | 31 | Relay 2 State | R | 1 | INTEGER | 0,1 0 means inactive, 1 means active. |
| 20 | 32 | Relay 1 Reset | R/W | 1 | INTEGER | Read as 0, write a 1 to reset relay 1 state. |
| 21 | 33 | Relay 2 Reset | R/W | 1 | INTEGER | Read as 0, write a 1 to reset relay 2 state. |

| GAS TYPE NUM | GAS |
|--------------|---------------|
| 0 | H2S |
| 1 | SO2 |
| 2 | O2 |
| 3 | CO |
| 4 | CL2 |
| 5 | CO2 |
| 6 | LEL |
| 7 | VOC |
| 8 | Feet |
| 9 | HCl |
| 10 | NH3 |
| 11 | H2 |
| 12 | ClO2 |
| 13 | HCN |
| 14 | F2 |
| 15 | HF |
| 16 | CH20 |
| 17 | NO2 |
| 18 | O3 |
| 19 | Inches |
| 20 | 4--20 |
| 21 | Not Specified |
| 22 | Celsius |
| 23 | Fahrenheit |
| 24..N | Future Gases |

| Relay Settings | Bit | Function |
|--------------------------|-----|-------------------------------------|
| Relay 1 Latch | 0 | 0 is unlatched, 1 is latched. |
| Relay 2 Latch | 1 | 0 is unlatched, 1 is latched. |
| Relay 1 Fail-safe | 2 | 0 is not fail-safe, 1 is fail-safe. |
| Relay 2 Fail-safe | 3 | 0 is not fail-safe, 1 is fail-safe. |
| Relay 1 Rise/Fall | 4 | 0 is fall, 1 is rise. |
| Relay 2 Rise/Fall | 5 | 0 is fall, 1 is rise. |
| Background Rise/Fall | 6 | 0 is fall, 1 is rise. |
| Background Low Rise/Fall | 7 | 0 is fall, 1 is rise. |

| UNIT TYPE NUM | UNIT |
|---------------|------|
| 0 | PPM |
| 1 | % |

| SENSOR NUM | TYPE |
|------------|---------------|
| 0 | EC |
| 1 | IR |
| 2 | CB |
| 3 | MOS |
| 4 | PID |
| 5 | TANK |
| 6 | 4--20 |
| 7 | SWITCH |
| 8 | Unknown |
| 30 | WF190 |
| 31 | None Selected |
| 5..N | Future Type |

| FAULT | FAULT |
|---------|--------------------------|
| 0 | NONE |
| 1 | Sensor Timeout |
| 2 | Future Error |
| 3 | Future Error |
| 4 | ADC not responding |
| 5 | Fault While nulling. |
| 6 | Fault While calibrating. |
| 7 | Future Error |
| 8 | N/A |
| 9 | N/A |
| 10 | N/A |
| 11...13 | Future Error |
| 14 | Radio not see primary. |
| 15 | N/A |

| MODE SENSOR | MODE |
|-------------|------------|
| 0 | NORMAL |
| 1 | NULL |
| 2 | CAL |
| 3 | RELAY |
| 4 | RADIO ADD |
| 5 | DIAGNOSTIC |
| 6 | ADVANCED |
| 7 | ADMIN |