



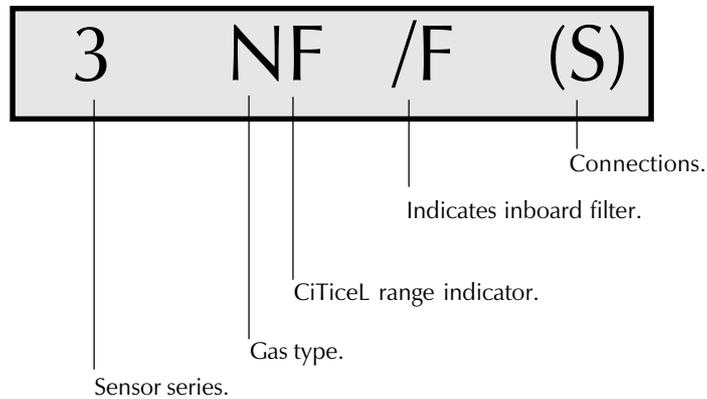
## Application Note 17 Toxic Gas Sensor Codes

### Toxic gas CiTiceLs

The coding of Toxic Gas CiTiceLs contains information about the sensor. As well as gas type and sensor characteristics, the code also identifies the connection used and, in some cases, the presence of an in-board filter:

#### Example:

A Nitric Oxide CiTiceL with high capacity inboard filter for SO<sub>2</sub> removal and side tag connections is coded **3NF/F(S)**.



#### Sensor Range:

- 2:** Two-electrode traditional 2-Series range of two-electrode sensors, not ideally suited in terms of size for safety applications.
- 3:** Traditional three-electrode 3-Series range, recommended for use in emissions monitoring applications.
- 4:** Three-electrode 4-Series Miniature range, designed for portable safety applications.
- 5:** New 5-series three-electrode sensors.
- 7:** Three-electrode 7-Series Compact range, designed for fixed and portable safety applications.
- A3/A7:** Four-electrode A3-Series or A7-series sensor ranges.
- A5:** Four-electrode, hydrogen-compensated, 5-series range.

#### Gas Type:

- |  |                             |
|--|-----------------------------|
| <b>E:</b> Carbon monoxide - except 4-Series which are denoted by <b>CO</b> and <b>CF</b> | <b>H:</b> Hydrogen sulphide |
| <b>HY:</b> Hydrogen  | <b>S:</b> Sulphur dioxide   |
| <b>HCN:</b> Hydrogen cyanide   | <b>N:</b> Nitric oxide      |
| <b>HL:</b> Hydrogen chloride   | <b>ND:</b> Nitrogen dioxide |
| <b>AM:</b> Ammonia   | <b>CL:</b> Chlorine         |
| <b>OZ:</b> Ozone   | <b>PH:</b> Phosphine        |
| <b>ETO:</b> Ethylene oxide   |                             |

**Exception:** E is omitted in the 3F/D and 3F/F Carbon Monoxide CiTiceLs.



### **CiTiceL Range Indicator:**

---

- E:** High range Environmental monitoring (e.g. 3HYE)
- F:** High range sensor, suitable for Elue gas (i.e. emissions) applications
- H:** High sensitivity, designed for low range monitoring (e.g. 3NDH)
- T:** Designed for Trace level monitoring (e.g. 3NT)

**Exception:** F omitted in the 3ND Nitrogen Dioxide CiTiceLs.

### **Inboard Filter:**

---

- F:** Standard size filter.
- D:** Increased capacity inboard filter.

### **Connections:**

---

- i) All 3-Series emissions monitoring sensors can be supplied with side tags (code - S), gold-plated PCB pins (code - G), or both (no code).

**Example:** *The 3F/F Carbon Monoxide CiTiceL:*

*with side-tags:* **3F/F(S)**

*with gold-plated PCB pins:* **3F/F(G)**

*with both side tags and PCB pins:* **3F/F**

**Exceptions:** 3ND (Nitrogen Dioxide), A3E/F and A3E/D (Carbon Monoxide) CiTiceLs are only available with both side tags and gold-plated PCB pins (no code).

- ii) All 4-Series CiTiceLs (no connection code) supplied with tin-plated PCB pins.
- iii) All 5-series sensors are supplied with nickel silver-plated PCB pins (except 5FO where the pins are gold-plated).
- iv) All 7-Series CiTiceLs (no connection code) supplied with gold-plated PCB pins.