

# MultiTox

## DGI-TT7 Electrochemical Gas Detector

Flexible configuration  
IS Cartridges  
Local display

The MultiTox DGI-TT7-E intelligent gas detectors employing a wide array of sensor types. The DGI-TT7-E is used for Toxic gases or Oxygen monitoring. The device has been designed for ease of operation and maintenance.



### Description

All DGI-TT7-E are constructed from a common housing and electronics with the detection properties being determined by the type of sensor (cartridge) used. A wide range of cells are available, including hydrogen sulphide, ammonia and carbon monoxide to name a few. The cells are intrinsically safe protected, and may be replaced with the detector powered

The intelligent, microprocessor driven unit is fully configurable using a wireless handheld terminal (TLU) or by using the hard wired HART option giving true flexibility to the installer. Elements such as relay operation and alarm levels are all set via the TLU, hazardous area approved handheld unit.

The unit may be interfaced directly with a wide range of panels, controllers and PLC's etc.

The device offers HART Protocol 7th edition output as an option.

### Application

- Refineries
- Offshore drilling and production platforms
- Processing and storage plants
- Chemical plants.

### Features

Standard detector platform

Auto heating of EC cell

Hot change of cells

Integral day light readable alphanumeric display

Hand held maintenance terminal

"No-touch" field cabling

HART(R) output option available

### Benefits

Wide range of cells

Suitable for low temperature

Minimises system down time

Local status and alarm level indication

Reduced service costs

Detector can be replaced without disassembling the cable glands

Full configuration and diagnostics over non-proprietary interface



TLU Wireless (IR)  
Handheld Terminal

# DGI-TT7

## Technical Data

### GENERAL

|            |                      |
|------------|----------------------|
| Technology | Electrochemical cell |
| Detects    | See table below      |
| Range      | See table below      |

### PERFORMANCES

See table below

### OUTPUT SIGNAL

|                |   |
|----------------|---|
| Standard       | 4-20mA, max. load impedance 700Ω (Std.)<br>2 x configurable Relays max 1A / 30V |
| option HART(R) | HART Protocol (7th edition) (pending)   |
| option         | 0-22mA (User configurable)  |
| option         | Lonworks (Syntel)   |
| Local display  | 4 digit LED display with automatic intensity adjustment                         |

### ELECTRICAL

|                   |   |
|-------------------|---|
| Power supply      | 24V DC, range (18 - 32V DC)   |
| Power consumption | 0.7W nominal<br>4,5W when heating   |
| Connection        | 0.14 mm <sup>2</sup> (28 AWG) - 1.5 mm <sup>2</sup> (16 AWG)<br>Shielded cable recommended. |


### ENVIRONMENTAL

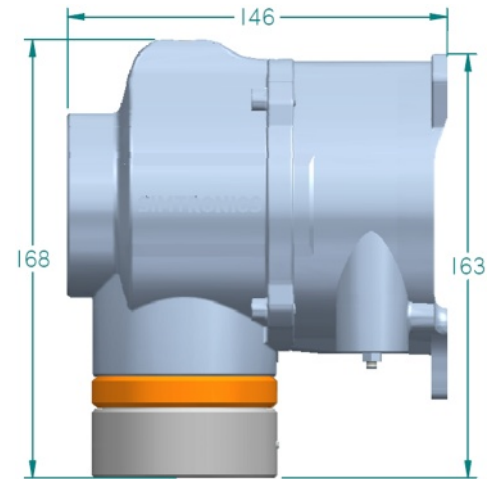
|           |   |
|-----------|---|
| Storage   | -40°C to +70°C Transmitter<br>0°C to +20°C (Cartridge / Cell) |
| Operation | See table below   |
| Humidity  | 0 to 95% RH (non-condensing)                                  |
| Pressure  | Atmospheric pressure +/- 10%                                  |
| Ingress   | IP66  |
| RFI/EMI   | Complies with EN50270.  |

### HOUSING

|          |                       |
|----------|-----------------------|
| Material | 316 L stainless steel |
| Weight   | 4 Kg (8Lbs)           |

### APPROVALS

|                    |  |
|--------------------|--|
| ATEX               |  II 2 G Ex dia IIC T6 Gb (-40°C to +65°C) |
| Certificate number | LCIE 12 ATEX xxxxxxxxxxxx  |
| IECEX              | Ex dia IIC T6 Gb<br>IECEX LCI 12.xxxxxxxxxxxx  |



### ACCESSORIES

|                     |   |
|---------------------|---|
| TLU600              | Infrared remote control unit  |
| AS008               | Sun shade   |
| AS005               | Calibration cup   |
| AS051               | Calibration cup for breakable ampoules  |
| AS011-2             | Sample flow housing   |
| AS019               | Splash guard  |
| CAL-K1C-xxAE-1A1-00 | Calibration kit (xx = gas to be specified)  |
| CAL-A00-xxAF-000-00 | Box of 10 breakable gas ampoule<br>(xx = 31 for 100ppm NH <sub>3</sub> , 39 for 50ppm H <sub>2</sub> S) |
|                     | For use with AS051 cup  |
| AS047               | Display protection  |

### OTHER PRODUCTS (STAINLESS STEEL RANGE)

|          |  |
|----------|--|
| DG-TT7-S | MultiTox, Solid-State (MOS) Gas Detector |
| DF-TV6   | MultiFlame, Flame Detector               |
| DG-TX    | MultiXplo, Flammable Gas Detector        |

| GAS   | O <sub>2</sub> | H <sub>2</sub> S               | NH <sub>3</sub>         | CO                                | NO        | NO <sub>2</sub> | H <sub>2</sub>               | SO <sub>2</sub> | Cl <sub>2</sub>      | HCl           | HCN       |
|---|----------------|--------------------------------|-------------------------|-----------------------------------|-----------|-----------------|------------------------------|-----------------|----------------------|---------------|-----------|
| Range (ppm)<br>(except O <sub>2</sub> % Vol.) | 0-5<br>0-25    | 0-20<br>0-50<br>0-100<br>0-200 | 0-50<br>0-100<br>0-1000 | 0-100<br>0-200<br>0-500<br>0-1000 | 0-100     | 0-20            | 0-1000<br>0-2000<br>0-10000* | 0-20<br>0-100   | 0-10<br>0-20<br>0-50 | 0-50<br>0-100 | 0-50      |
| Zero drift in % scale                         | < 0.1          | < 1                            | < 3                     | < 2                               | < 3       | < 0.5           | < 1.5                        | < 1             | < 0.5                | < 3           | < 1       |
| T 90 (seconds)                                | < 20           | < 60                           | < 120                   | < 35                              | < 20      | < 45            | < 50 * < 70                  | < 30            | < 30                 | < 160         | < 40      |
| Cell lifetime (months)                        | 12 to 18       | 24                             | 18                      | 18                                | 36        | 24              | 24                           | 24              | 24                   | 24            | 18        |
| Temperature °C                                | -10 / +40      | -20 / +50                      | -20 / +40               | -20 / +50                         | -20 / +50 | -20 / +50       | -20 / +50                    | -20 / +50       | -20 / +40            | -20 / +50     | -20 / +40 |

