

DGT-t2 DGT-t2-ex digital gas transmitter

General:

The combination of Avaco Systems & Safe Solutions is a service package that includes skilled expert services, design assistance, high-quality equipment deliveries and after-sales marketing consultations.

DGT-t2 / DGT-t2-ex serial digital gas sensor / transmitter is a new and innovative device for different controls and alarms.

The DGT-t2 detector is designed for detecting ammonia, R coolants, carbon monoxide and waste gases.

The DGT-t2 / t2-ex transmitter will be customised at the factory according to the customers detection needs. The sensor element will be chosen according to the measured gases and measuring requirements in order to find the best solutions for each application.

Together with Scan controllers or other existing control systems the DGT-t2 units form a reliable and efficient system for gas detection with comprehensive alarm and control functions.

The DGT-t2 features a TeK-temperature compensation, allowing operation also in cold conditions.



Enclosure dimensions: 89 mm x 89 mm x 69 mm. The enclosure base can be turned up side down for the wires. Installation depending of the controlled gas. Enclosures, DGT-t2w (in the picture) for wall-, DGT-t2d for duct and DGT-t2c for ceiling installation. Easy mounting due to the isolating/mounting plate.



DGT-t2-ex belongs to Equipment Category 3 and the sensor can be installed in Zone 2 areas.

Atex marking: **II 3G Ex ec IIC T4 Gc**

DGT-t2r / DGT-t2r-ex transmitters can be outfitted with a relay output, buzzer and indication lights (green / red). With these options, the transmitter can operate also as a stand alone unit.

Installation:

The delivery of the equipment includes instructions for the installation and the connection.

The cabling shall be done according to the diagrams with the delivery.

Calibration:

The transmitters are calibrated to the measuring range at the factory to the needs of controlling.

It is recommended to recalibrate the detectors every year and operational tests (ON / OFF-test) every 4 – 6 months

Certificates:

Bureau Veritas Type approval certificate 48510/AO BV for marine use.



Applications:

- Cold storages
- Refrigerating stores
- Ice skating rinks
- Car Parks
- Vessels, Cruisers

Technical data:

SENSOR TYPE: Semi-conductor sensor
DETECTED GASES: Combustible and toxic gases, solvents, coolants, carbon monoxide and hydro carbons

| SENSOR APPLICATION | TARGET GASES | | TYPICAL DETECTION RANGES (ppm) | FEATURES |
|-----------------------|----------------------------|-----------------|--------------------------------|--|
| | GAS | FORMEL | | |
| TOXIC GAS DETECTION | Ammonia | NH ₃ | 10 - 1000 | High sensitivity to ammonia (special calibrations) |
| | Carbon Monoxide | CO | 10 - 10000 5 - 250 | E.g. Exhaust gas (CO/ HC) |
| R - COOLANT DETECTION | R134a, R22 R404A, R407C | | 10 - 1000 10 - 1000 | High sensitivity to various R refrigerants |
| STAND ALONE OPERATION | Accessory (option) | Relay 24V/1A | | Relay output, indication lights and a buzzer (DGT-t2r) |

SENSOR:

T90 Response time: < 30 seconds (typical)
 Sensor life time: 3...5 years (depending of the controlled gas)
 Calibration: The detectors are delivered factory calibrated to the measuring range.
 After installation it is recommended to calibrate the detector at least once per year.
 It is also recommended to do functional tests to the detector 4-6 times a year.

ENVIRONMENTAL:

Operating humidity: 15...90 % RH non-condensing
 Operating pressure: Operating air pressure – Normal air pressure +/- 10 %
 Operating temperature: -30 ... +40°C ammonia,
 -20 ... +40°C other gases (ask for further information)

ELECTRICAL:

Output signal: DGT-t2 4 - 20 mA linear response
 DGT-t2r 4 - 20 mA linear response + relay output 24V / 1A
 Operating voltage: 24 V DC / VAC, +/- 20 %, regulated (DGT-t2-ex only 24 VDC version)
 Cable requirements: Safe zone: 4-wire connection e.g. Jamak 2 x (2+1) x 0,5 mm² (or equal)
 Ex zone: cable must be in accordance with 60079-14 standard
 Power consumption: 4 W (max)

ENCLOSURE:

Installation Possibilities: wall-, ceiling, duct- and pipe assembly
 Material: Cast Aluminium Silicate, epoxy painted (beige or grey RAL 7032)
 Degree protection: IP54
 Dimensions: 89 mm x 89 mm x 69 mm / 620g
 Mounting: Isolating / mounting plate with 2-4 screws and / or enclosure with 2 screws
 Cable penetration: STR16, for cables with diameters 6-12 mm, body polyamide, Gasket CR

Ex-marking:**DGT-t2-ex and DGT-t2r-ex: II 3G Ex ec IIC T4 Gc****CERTIFICATE:****Type approval for Marine use: Certificate nr. 48510 / AO BV (Bureau Veritas)****DGT gas detectors**

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