

# TX401L Point Gas Detector

ATEX II 2GD – EEx d IIC T6

3-wire 4-20mA + 10-bit Microprocessor

Real non intrusive + one man local calibration and configuration



## TX401L key features

- Extremely robust IP66 flameproof aluminium die casting enclosure with yellow chromatic RAL 1007 epoxy coating. Optional AISI 316L heavy and oxidation free stainless steel execution.
- 1-piece AISI 316L sensor enclosure with fritted filter and resins sealed sensor.
- Ideal for harsh environment as chemical and petrochemical industry, offshore oil and gas platforms, onshore oil and gas terminals, refineries, LNG/LPG storage and bottling plants, Industrial hygiene & safety monitoring, Soil contamination and remediation, Landfill, Biogas and Biomass applications, Hazmat sites and spills, waste water, paper and pulp, ...
- 3 digit display, 4-20mA output, ambient temperature measure with automatic compensation, non-intrusive one man local calibration
- Diffusion mode detection principle, no moving parts (pump), higher reliability, lower maintenance costs

## Choice of gas sensors

- Catalytic combustion (CC) for %LEL HC, NH<sub>3</sub> and H<sub>2</sub>
  - Electrochemical (EC) for ppm toxic gases and %Oxygen
  - Infrared (NDIR) for %LEL and %HC, ppm and %CO<sub>2</sub>
  - Solid State (SS) for ppm H<sub>2</sub>S for petrochemical applications
- Continuous monitoring of detector failure, sensor operation and life time.
  - Programmable response factors to reference gas for CC sensor.
  - **Included accessories:** wall mounting bracket, ATEX brass cable gland, magnet interface
  - **Options:**
    - Removable wind/water/dust sensor protection in black Delrin
    - Removable wind/water/dust sensor protection in stainless steel AISI 316L with integrated calibration adapter
    - Stainless steel ATEX AISI 316L electronics enclosure and cable gland
    - Flow chamber in stainless steel AISI 316L, for gas sampling applications
    - Duct mounting plate with calibration connection
    - Automatic temperature compensation (included in the standard delivery for infrared sensors)



Gas Detection and Analysis  
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## Mechanical

Safety Approval	<b>ATEX II 2G - EEx d IIC T6</b> (CESI 03 ATEX 283 and 282U), GOST (NDIR)
Detector enclosure	Anodised aluminium dye casting with marine grade epoxy finish (stainless steel AISI 316L in option) Windowed cover - Dimensions : Ø 90 mm x depth 73 mm
Sensor enclosure	1-piece AISI 316L sensor enclosure with fritted filter and resins sealed sensor
Ingress protection	Electronics enclosure : IP66 Sensor enclosure : IP45 (IP66 with optional sensor protection) Nickel plated cable gland : IP68
Weight	± 0,9 kg (1,6 kg for stainless steel)
Supply voltage	Nominal 24 VDC (operates from 10 to 32 VDC)
Cable gland entries	3x 3/4" NPT
Wiring	SWA type 3-wire 1,5 mm <sup>2</sup> max. cable for supply voltage and 4-20mA signal

## Electronics

Electronics	10-bit microprocessor-based electronics
Operating temperature range	- 40°C to + 85°C
Display	3 digits 7 segments LED display
Supervision and fault codes	<ul style="list-style-type: none"><li>• Sensor remaining lifetime and end of life</li><li>• Temperature transducer (option)</li><li>• Negative drift and over-range</li><li>• EEPROM communication failure</li></ul>
Analogue Output	0-22mA, source type, continuously controlled by the microprocessor
Configuration et calibration	Safe non-intrusive one-man local calibration & adjustments via magnetic key interface; No need of Ex-proof certified handheld interrogator unit for field configuration and/or calibration
Electromagnetic conformance	EMC complies with EN 50081-1 and EN 50082-1

## Sensors

Operating RH range	0 - 95% RH non condensing.
Operating temperature range	Electrochemical : - 20°C to + 50°C Infrared (NDIR) : - 40°C to + 70°C Catalytic combustion : - 40°C to + 85°C Solid state : - 40°C to + 85°C
Resolution, linearity, repeatability	Sensor dependent, at least better than 1% of full scale value
Response time	From < 5 sec to 45 seconds, sensor dependent
Sensor types and gases	<b>Electrochemical</b> : CO, NO, NO <sub>2</sub> , SO <sub>2</sub> , H <sub>2</sub> S, H <sub>2</sub> , NH <sub>3</sub> , Cl <sub>2</sub> , HCL, HCN, O <sub>3</sub> , PH <sub>3</sub> , C <sub>2</sub> H <sub>4</sub> , CH <sub>2</sub> O and ETO (maximum measuring range is 0-999 ppm, sensor dependent) <b>Galvanic fuel cell</b> : O <sub>2</sub> (0-100%) <b>Non Dispersive Infrared</b> : general hydrocarbons (0-100% LEL or 0-100% ), methane (0-5% or 0-100%), propane (0-2% or 0-100%), propylene (0-2%), pentane (0-2%), butane (0-2%), ETO (0-3%), ethane (0-3%), hexane (0-1%), ethanol (0-5%), ethylene (0-3%), isopropanol (0-2%), acetic acid (0-4%), methanol (0-5,5%), toluene (0-1,1%) and CO <sub>2</sub> (0-999ppm and 0-100%) <b>Catalytic combustion</b> : CH <sub>4</sub> and ± 34 different HC %LEL (RF to reference gas methane) <b>Solid state (MOS)</b> : H <sub>2</sub> S 0-100 ppm

Non contractual pictures and specifications - subject to change without prior notification - issue EN09v1

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