

DrägerSensor® Smart CatEx (FR PR)

Order no. 68 12 975

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 7000	yes	yes	2 years	> 3 years	–

MARKET SEGMENTS

Gas supply companies (methane leak detection), telecommunications, shipping, sewage, refineries, chemical industry, mining, landfills, biogas plants, tunneling.

TECHNICAL SPECIFICATIONS

Detection limit:	2% LEL
Resolution:	1.0% LEL for the measuring range 0 to 100% LEL 0.02 Vol.-% for the measuring range 0 to 5 Vol.-% CH ₄ (methane) 1 Vol.-% for the measuring range 5 to 100 Vol.-% CH ₄ (methane)
Measurement range:	0 to 100% LEL or 0 to 100 Vol.-% CH ₄ (methane)
General technical specifications	
Ambient conditions	
Temperature:	(–20 to 55)°C (–4 to 131)°F
Humidity:	(10 to 95)% RH
Pressure:	(700 to 1,300) hPa
Warm-up time:	≤ 5 minutes

FOR THE MEASUREMENT RANGE 0 TO 100% LEL WHEN CALIBRATED WITH METHANE IN AIR:

Response time:	≤ 7 seconds (t ₅₀) ≤ 9 seconds (t ₉₀)
Precision:	≤ ± 2.5% of measured value
Linearity error:	≤ ± 4% LEL (0–40% LEL) ≤ ± 10% of measured value (40–100% LEL)
Long-term drift	
Zero point:	≤ ± 3% LEL/month typ. values for X-am 7000 ≤ ± 1% LEL/month
Precision:	≤ ± 3% LEL/month typ. values for X-am 7000 ≤ ± 1% LEL/month
Influence of temperature	
Zero point:	≤ ± 0.1% LEL/K at (–20 to 40)°C (–4 to 104)°F
Precision:	≤ ± 0.2% of measured value/K at (–20 to 40)°C (–4 to 104)°F
Influence of humidity	
Zero point:	≤ ± 0.05% LEL/% RH
Precision:	≤ ± 0.3% of measured value/% RH
Effect of sensor poisons:	Hydrogen sulfide H ₂ S 1000 ppmh ≤ ± 10% of measured value Hexamethyldisiloxane HMDS 10 ppmh ≤ ± 5% of measured value Hexamethyldisiloxane HMDS 30 ppmh ≤ ± 20% of measured value After an exposure of 10 ppm HMDS for 5 hours, the sensitivity loss is less than 50%. Halogenated hydrocarbons or volatile silicon, sulphur, heavy metal compounds or substances that can polymerize → potential poisoning.

FOR THE MEASUREMENT RANGE 0 TO 100 VOL.-% CH₄:

Response time:	≤ 18 seconds (t ₉₀) at 0 to 5 Vol.-%
Precision:	≤ ± 2.5% of measured value
Linearity error	
0 to 50 Vol.-%	≤ ± 5 Vol.-%
50 to 100 Vol.-%	≤ ± 10% of measured value
Long-term drift	
Zero point:	≤ ± 3 Vol.-%/month
Sensitivity	≤ ± 3 Vol.-%/month
Influence of temperature	
Sensitivity 0 to 50 Vol.-%	≤ ± 0.2 Vol.-%/K at (-20 to 40)°C (-4 to 104)°F
Sensitivity 50 to 100 Vol.-%	≤ ± 0.3% of measured value/K at (-20 to 40)°C (-4 to 104)°F
Influence of humidity	
Sensitivity 0 to 50 Vol.-%	≤ ± 5 Vol.-%/% RH
Sensitivity 50 to 100 Vol.-%	≤ ± 0.2% of measured value/% RH
Test gas:	approx. 2 Vol.-% or 50 Vol.-% CH ₄

SPECIAL CHARACTERISTICS

The DrägerSensor® Smart CatEx (FR PR) is especially suitable for detecting leaks on account of its fast response time (t₉₀) of less than 9 seconds for methane. It has an excellent poison resistance against hydrogen sulfide, siloxane and other sensor poisons.

Response time of DrägerSensor® Smart CatEx (FR PR)
in X-am 7000

