

TS 21 I CAT H2 (Hydrogen)



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Product Description

TS 21 I CAT H2 Gas leak detector is designed for the detection and early warning of Hydrogen gas leaks originating from cylinders or pipelines. Gas detection is achieved through diffusion, where gas particles must reach the pellister sensor within the detector for detection to occur. The sensor's accuracy is constrained, with variations typically falling within the range of 0 to 100% LEL. TS 21 I CAT H2 detector is specifically calibrated to trigger **Low & High Alarm** 10% LEL (Low Alarm) & 50% LEL (High Alarm) as factory default that alerts the user before gas concentration reaches up-to explosive limit.

Detector is designed to provide status with **PFC relay, Modbus, 4 – 20 mA & 5 – 10 mV** to integrate with third party application. The **explosion proof, PESO** certified with **IP 66/67** design of this unit makes it suitable for cost-effective deployment in commercial & Industrial application.

Application:

- Refineries
- Chemical fertilizer Plant
- H2 refilling station
- Gas Boilers
- Battery bank
- H2 cylinder bank
- UPS room
- Valve manifold
- Gas Cabinet

Product Features:

- Make in India product with unique patent.
- Microcontroller based design for accuracy.
- Suitable for **Hydrogen** also detect LPG & PNG, CNG
- **PESO CCOE** approved with **Ex. proof** gland & enclosure.
- Two PFC relay for alarm output integration.
- LCD & LED indication for easy monitoring operation.
- **IP 66/67** protection, **Zone 1 & 2, & Zone 21 & 22** certified.
- 4-20 mA, 5-10 mV & Mod-bus RTU & RS-485.
- Digital Input for Valve status & Onsite calibration.
- CMRI certified sensor housing (SS316) & replaceable sensor
- **BIS-CM/L – 3927980, ISO 9001-2015,**

Technical Specifications:

Specifications	
Power Supply	Input: 18 to 32 Vdc 200 mA
Sensor principle Sensor material Sensor Life	Catalytic combustion principle SS 316 (Replaceable Sensor) 6 to 24 Month life
Response Time Drift Over Year	T90 < 10 to 30 seconds ± 2 % FSD
Output / Input	OUTPUT: Two PFC relay with 2 Amp contact rating LED Indication – 1. Power ON: green LED 2. Low Alarm: orange LED 3. High Alarm: red LED RS-485 for networking & Modbus RTU with max 255 slave ID

	INPUT: Digital Input for Valve status 4 digital input magnetic Key
Hazardous Classification Certified Zones	Ex II 2 G Exd ia IIC T4 Gb Zone 1 & 2, and Zone 21 & 22 hazardous areas
Operating Temperature	- 40°C to 70°C, Storage Temperature --10°C to 70°C,
Humidity	0 to 95% Rh
Mechanical specifications	
Enclosure Cable Entry	Aluminum Alloy LM6, Flameproof Enclosure, Double compression cable gland (Ex-proof). M20 x 2 nos.
Dimensions	150 mm (L) x 145 mm (W) x 150mm (H)
Mounting	Wall Mounting / Stand mounting

Weight	1.5 Kg
Transmitter Warranty	Standard 1 year warranty on manufacturing defects
Models & Variants	TS12CHR-(Commercial grade)
Accessories	<ul style="list-style-type: none"> • TS21 I CAT H2 Unit • Allen Key • User guide • Magnetic Stylus
Certificate	PESO CCOE approved, BIS-CM/L – 3927980, ISO 9001-2015 IP 66/67
Abbreviation	<ul style="list-style-type: none"> • 21-Two O/P one I/P, • I- Industrial Grade, • HC – Hydrocarbon gases application.

Mounting Details:

H2 Detection

- H2 is lighter than air. It has tendency to settle at ceiling level.
- Hence, it must be installed near up to the potential leakage point Or at 30Cm below from the ceiling level.

