TracXP™
Industrial Gas Solutions
by Macurco

TracXP is now a part of Macurco Gas Detection, a company that has been providing gas detection solutions for over 45 years. The TracXP line addresses special hazard applications with a comprehensive line of wired and wireless gas detection solutions to meet your most challenging applications.

TXP-FDE IR³-HD

Flame Detector by FGD

The new TracXP TXP-FDE IR³-HD triple IR flame detector ensures the highest immunity to false alarms and provides an ultra-fast response, high performance, and reliable detection of all types of hydrocarbon fires (visible and non-visible). The detector addresses slow-growing fires as well as the fast eruption of fire using improved triple IR (IR3) technology. Integral event recording provides the ultimate safety tool to protect your personnel, plant, and processes. The IR³-HD's high definition camera allows clear imaging of fire and personnel at 100ft (30m) distance. Video recording of one-minute pre-event and up to three minutes post-event provides visual documentation of the event. DVR/NVR streaming provides a response team plan of attack information, as well as post-event response review and assessment for training purposes.

TXP-FDE IR³-HD

Key Features

- Extreme sensitivity - up to 260ft.
- 1.3 seconds detection time for $1ft^2$
- Ultra-fast detection mode – detection within 40 milliseconds for fireballs or explosions
- High immunity to false alarm
- HD video output with automatic HD video recording of fire events
- Data / event logger - alarms, faults, etc
- Built-in-test (BIT) automatic & manual self test of window cleanliness & operation
- Window heater to avoid condensation & icing
- Tilt mounting bracket can be connected above or below detector

Applications

- Oil & Gas
- Fuel storage facilities & terminals
- Refining & chemical production
- Pipeline compression
- Oil drilling
- Aircraft hangars & maintenance facilities
- Pulp & paper
- Power generation
- Warehousing
- General industry

TXP-FDE IR³-HD

Response Data

Fuel Source	Size	Sensitivity	Distance ft. (m)	Avg. Resp. Time(s)
N-Heptane	1x1 ft.	Extreme	262' (80m)	9.0 seconds
N-Heptane	1x1 ft.	Extreme	230' (70m)	4.1 seconds
N-Heptane	1x1 ft.	High	197 '(60m)	3.2 seconds
N-Heptane	1x1 ft.	Medium	98' (30m)	1.5 seconds
N-Heptane	1x1 ft.	Low	49' (15m)	1.2 seconds
Gasoline	2x2 ft.	Extreme	328' (100m)	5.3 seconds
Gasoline	1x1 ft.	Extreme	230' (70m)	3.6 seconds
Gasoline	1x1 ft.	Medium	98' (30m)	1.5 seconds
Methane	32-inch plume	Extreme	148' (45m)	3.3 seconds
Methane	32-inch plume	Medium	82' (25m)	0.8 seconds
LPG	32-inch plume	Extreme	180' (55m)	4.8 seconds
LPG	32-inch plume	High	148' (45m)	2.9 seconds
LPG	32-inch plume	Medium	98' (30m)	1.4 seconds
LPG	32-inch plume	Low	49' (15m)	1.4 seconds
Diesel	1x1 ft.	Extreme	164' (50m)	2.9 seconds
Diesel	1x1 ft.	Medium	79' (24m)	3.9 seconds
JP5	2x2 ft.	Extreme	295' (90m)	9.2 seconds
JP5	1x1 ft.	High	164' (50m)	5.8 seconds
JP5	1x1 ft.	Medium	148' (45m)	4.9 seconds
JP5	1x1 ft.	Low	79' (24m)	1.9 seconds
Kerosene	1x1 ft.	Extreme	164' (50m)	4.1 seconds
Kerosene	1x1 ft.	Medium	79' (24m)	2.5 seconds
Ethanol	1x1 ft.	Extreme	125' (38m)	4.2 seconds
Ethanol	1x1 ft.	Medium	75' (38m)	1.6 seconds
Isopropanol	1x1 ft.	Extreme	180' (55m)	3.5 seconds
Isopropanol	1x1 ft.	Medium	75' (23m)	1.0 seconds
Paper	1x1 ft.	Extreme	79' (24m)	0.9 seconds
Paper	1x1 ft.	Medium	39' (12m)	0.8 seconds

Since 1972 Macurco has been providing gas detection solutions for various applications. Macurco provides the highest quality gas detection solutions to customers worldwide.

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False Alarm Immunity

False Alarm Source	Modulated		Un-Modulated	
	Distance ft. (m)	Response	Distance ft. (m)	Response
Sunlight, Direct, Reflected		No Alarm		No Alarm
Incandescent frosted glass light, 300W	2.0 ft. (0.6m)	No Alarm	2.0 ft. (0.6m)	No Alarm
Fluorescent, 70W (3 x 23.3W)	2.0 ft. (0.6m)	No Alarm	2.0 ft. (0.6m)	No Alarm
Electric Arc	2.0 ft. (0.6m)	No Alarm	2.0 ft. (0.6m)	No Alarm
Arc Welding	13.1 ft. (4.0m)	No Alarm	13.1 ft. (4.0m)	No Alarm
Radiation eater, 1850W	2.0 ft. (0.6m)	No Alarm	2.0 ft. (0.6m)	No Alarm
Quartz Lamp (1,000W) Shielded	2.0 ft. (0.6m)	No Alarm	2.0 ft. (0.6m)	No Alarm
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Approvals

Explosion Proof	ATEX: II 2 G D
	Ex db IIC T5 Gb or Ex db eb IIC T5 Gb and Ex tb IIIC T95°C Db -55°C<Ta<75°C
	Ex db IIC T4 Gb or Ex db eb IIC T4 Gb and Ex tb IIIC T105°C Db -55°C<Ta<85°C
	IECEx
	Ex db IIB T5 Gb -50°C≤Ta≤75°C and Ex db IIB T4 Gb -50°C≤Ta≤85°C
	FM & FMC
	Class I, Div. 1, Groups B, C & D; T4
	Class I, Zone 1, AEx/Ex db IIB T4 Gb
	T4 -50°C≤Ta≤85°C, T5 -50°C≤Ta≤75°C
Performance	ANSI FM 3260
	EN 54-10 (pending)
Functional safety	SIL2, per IEC 61508.
DNV GL (pending)	Standard DNVGL-CG-0339 for open deck locations
	Temperature class D; Vibration Class A, B and C
EAC CU TR (pending)	

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Macurco Gas Detection
3601 N St. Paul Ave,
Sioux Falls, SD 57104   **Phone:** 1-877-367-7891   **Website:** www.macurco.com   **Email:** info@macurco.com

TXP-FDE IR³-HD

Specifications

Flame Detector Specifications

Flame Detection	Detection time & distance	40ms for fast fire burst or explosion
		1.5s for 1 ft2 (0.1m2) pan fire at 0–100 ft. (0–30m)
		4.1s for 1 ft2 (0.1m2) pan fire at 100–230 ft. (30–70m)
	Field of view (IR detection)	90° Horizontal, 75° Vertical
	Built-in-test (BIT)	Automatic and Manual
	Time delay	0 - 30 Seconds
Video Functionality	Time delay	0 - 30 Seconds
	Video recording of alarm events	1 minute pre-event ,and 1, 2 or 3 minutes post-event
	System integration protocol	ONVIF (Open Network Video Interface Forum) Profile S
Electrical Specifications	Operating Voltage	24 VDC nominal (18-32 VDC)
	Current consumption	Standby: 180mA
		Maximum: 250mA all systems in operation (including window heater)
	Conduit Entries	**2x conduit entries 3/4" 14NPT or M25x1.5**
	Wiring	12-20AWG (2.5-0.35mm2)
Outputs	Relays	Volt-free contacts rated 2A at 30 VDC
		Alarm – normally open
		Fault – normally closed
	10 - 20mA (stepped) current output	3 wire and 4 wire configurations (sink and source)
	Modbus	RTU compatible on RS-485
	Station Indication	Tri-Color LED
	Digital (for video)	IP network IEEE 802.3 10Base-t
	Composite Video	NTSC or PAL
Mechanical Specifications	Size	7.87 x 5.12 x 5.12" (200x130x130mm)
	Weight	Detector (Stainless Steel 316): 9.8 lbs. (4.4 kg)
		Tilt mount (Stainless Steel 316): 5.4 lbs. (2.4 kg)
Environmental Specifications	Temperature	Operating: -67°F to +167°F (-55°C to +75°C)
		Option: -67°F to +185°F (-55°C to +85°C)
		Storage: -67°F to +185°F (-55°C to +85°C)
	Relative Humidity	Up to 99% (RH), non-condensing
	Ingress	IP66 & 68; NEMA 4X & 6P

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