

PERSONAL SIZE MULTI-GAS MONITORS

TETRA

FEATURES

- SIMULTANEOUSLY MONITORS ONE TO FOUR GASES
- SINGLE BIG BUTTON FOR EASY OPERATION
- LOW COST, IDEAL FOR MANY APPLICATIONS
- LARGE, HIGH CONTRAST DISPLAY WITH BACKLIGHT
- BUILT-IN ELECTRIC AIR PUMP OPTION
- AUTO ZERO SELF CHECK FUNCTION
- VERY RUGGED WITH SHATTERPROOF HOUSING
- HIGHLY WATER, DUST, AND SHOCK RESISTANT
- FLOATS IN WATER AND MOST LIQUIDS
- COMPACT AND LIGHTWEIGHT DESIGN
- LOUD AUDIO ALARM AND CLEAR ULTRA BRIGHT
- FLASHING LEDs
- BUILT-IN VIBRATING ALARM
- BATTERY PACK LASTS LONG WITH NO MEMORY EFFECTS
- DATALOGGER OPTION WITH EASY WINDOWS SOFTWARE



Tetra monitors from one to four gases with a single button that controls all functions. A backlit "at-a-glance" display provides simultaneous viewing of all gas readings, alarm conditions, and battery life. Tetra units are very rugged despite its compact size and low weight of around one pound (500 g). The shatterproof plastic housing is over-molded with rubber and incorporates a flexible internal architecture to resist shock and vibration. The unit is water and dust resistant to IP65, floats in water, and is UL, CSA, and ATEX approved for use in hazardous areas.

Tetra gives rapid and effective warnings of the presence of gas when hazardous levels are detected. The user is alerted by extremely bright blue and red LED beacons and a powerful 90 dBA alarm. Alarm tones are adjustable to ensure easy discrimination from noisy machinery. An integral vibrating alarm is also a standard feature. Tetra is easily customized for different applications with intelligent, user-changeable sensor modules that are pre-calibrated for a wide range of gases to allow "plug and play" operation. Sensors are available for Oxygen, flammable gas and a full range of toxic gases, including all hazards commonly encountered in confined spaces.

Two versions of the instrument are available including a rechargeable unit using lithium-ion batteries for 12 hours' operation from one charge, and a version powered by three conventional AA alkaline batteries. For testing confined spaces prior to entry, Tetra can be specified with an optional built-in electric sampling pump or used with a separate manual aspirator.



CEA Instruments, Inc.

"EXPERTS IN TOXIC GAS DETECTION"

TETRA SPECIFICATIONS

WEIGHT	1.1 pound (498 grams)																		
DIMENSIONS	4.75 x 5.0 x 2.5 inches (122 x 128 x 57 mm) - Rechargeable Version 5.25 x 5.0 x 2.5 inches (134 x 128 x 57 mm) - Alkaline Version																		
TYPICAL GASES	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">COMBUSTIBLE GAS (%LEL)</td> <td style="width: 33%;">SULFUR DIOXIDE</td> <td style="width: 33%;">AMMONIA</td> </tr> <tr> <td>OXYGEN</td> <td>NITROGEN DIOXIDE</td> <td>CHLORINE</td> </tr> <tr> <td>CARBON MONOXIDE</td> <td>NITRIC OXIDE</td> <td>HYDROGEN</td> </tr> <tr> <td>HYDROGEN SULFIDE</td> <td>OZONE (NON-PUMPED)</td> <td>PHOSPHINE</td> </tr> <tr> <td>HYDROGEN FLUORIDE</td> <td>ETHYLENE OXIDE</td> <td>PHOSGENE</td> </tr> <tr> <td>HYDROGEN CYANIDE</td> <td>CARBON DIOXIDE (IR)</td> <td></td> </tr> </table>	COMBUSTIBLE GAS (%LEL)	SULFUR DIOXIDE	AMMONIA	OXYGEN	NITROGEN DIOXIDE	CHLORINE	CARBON MONOXIDE	NITRIC OXIDE	HYDROGEN	HYDROGEN SULFIDE	OZONE (NON-PUMPED)	PHOSPHINE	HYDROGEN FLUORIDE	ETHYLENE OXIDE	PHOSGENE	HYDROGEN CYANIDE	CARBON DIOXIDE (IR)	
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TYPICAL RESPONSE	Combustibles 20 seconds; Oxygen 10 seconds; Toxic Gas 20 seconds																		
ALARMS	Adjustable alarms set to current U.S. OSHA limits (<i>unless specified otherwise</i>). Two instantaneous alarm levels per channel with TWA alarm levels added for toxic gases. Audible 90 dBA at 1 foot with multiple alarm sounds that allow selection of distinctive tones for different alarm levels. Visual dual color red/blue flashing LED pair in gas hazard. Each unit is supplied with an internal vibrating alarm.																		
DISPLAY	128 x 64 graphic LCD with backlight giving simultaneous display for all gas channels with display recall for Peak and TWA readings. Graphic symbols are displayed for battery level, pump operation, calibration information, fault and operation warnings, and more.																		
DATALOGGING	Event logging, continuous																		
BATTERY	Rechargeable Li-ion battery lasts 12 hours minimum between charging. Optional non-rechargeable pack uses 3 AA disposable alkaline cells for 18 hours minimum operation.																		
SAMPLING	Internal electric air pump or hand aspirator for optional diffusion version.																		
TEMPERATURE	-4°F to 131°F (-20°C to 55°C)																		
HUMIDITY	0 to 99% RH																		
APPROVALS	UL, CSA (Class 1, Div. 1, Groups A, B, C, D) and other worldwide intrinsic safety approvals.																		
INGRESS PROTECTION	NEMA 4X (tested to IP65) - highly water resistant and dust proof.																		
PC INTERFACE	IR link for RS232 connection (USB/RS232 Converter available). Portables PC software package provides full configuration control, calibration, and access to the Event log file.																		
AUTOCALIBRATOR	Multiple Tetra units can be routinely calibrated quickly and simply using Autocalibrator II in conjunction with the Portables PC software. The internal pump of Autocalibrator II handles up to five different gases while a PC interface provides easy access with optional datalogging for proof of calibration.																		

(Specifications subject to change without notice.)



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TETRA PRICE LIST

Tetra units are supplied with an internal datalogger, built-in vibrating alarm, pocket clip, and operation manual as standard. Rechargeable versions include a Lithium Ion battery pack and a multi-region power supply with US, UK, EU, and AU plug adapters. All units are prepared as the Rechargeable version (*unless the AA battery pack is specified*). Pumped versions include a built-in electric air pump, aspirator plate, in-line filter and tubing.

Choose one of the below Tetra base instrument versions.

	Pump	Battery Type	Part Number	Price
Tetra (no sensors)	Internal	Rechargeable	TET-01	\$ 709.00
Tetra (no sensors)	No	Rechargeable	TET-02	\$ 569.00
Tetra (no sensors)	Internal	Alkaline	TET-01/A	\$ 699.00
Tetra (includes CO2 IR sensor)	Internal	Rechargeable	TET-03	\$1310.00

Choose up to four of the below **i-module sensor assemblies** by adding each letter Code to the end of the above Part Number and by adding each sensor Price to the base Price of the above Tetra version selected.

Part Number	Description	Code	Price
S011424	0-100% LEL Methane** <i>(as standard unless another gas is specified)</i>	A	\$ 208.00
S011423	0-25% Oxygen	B	\$ 138.00
S011422	0-500 ppm Carbon Monoxide	C	\$ 200.00
S011421	0-100 ppm Hydrogen Sulfide	D	\$ 200.00
S011463	0-1500 ppm Carbon Monoxide	Hi C	\$ 200.00
S011912	0-500 ppm Hydrogen Sulfide	Hi D	\$ 200.00
S011425	0-20 ppm Sulfur Dioxide	E	\$ 343.00
S011426	0-10 ppm Nitrogen Dioxide *	F	\$ 388.00
S011427	0-20 ppm Nitrogen Dioxide *	Hi F	\$ 388.00
S011428	0-20 ppm Chlorine *	G	\$ 300.00
S011430	0-25 ppm Hydrogen Cyanide	H	\$ 460.00
S011431	0-5 ppm Phosphine *	I	\$ 454.00
S011435	0-100 ppm Ammonia	J	\$ 566.00
S011438	0-1000 ppm Ammonia	Hi J	\$ 566.00
S011852/M	0-100 ppm Nitric Oxide	M	\$ 323.00
S011432	0-1 ppm Ozone * (<u>Only Diffusion Versions</u>)	O	\$ 663.00
S01194/M	0-10 ppm Ethylene Oxide	Q	\$ 383.00
S011433	0-10 ppm Hydrogen Fluoride *	R	\$ 759.00
S011464	0-1 ppm Phosgene *	S	\$ 759.00
S011429	0-2000 ppm Hydrogen	T	\$ 470.00
S012171/M	0-5% Carbon Dioxide IR (uncertified safe area only)	2	\$ 433.00

* Readily absorbed gases that will not be properly detected if an internal pump, aspirator, or hose are used.

** LEL sensors are calibrated to Methane unless Propane, Pentane, Butane, Ethylene, Hydrogen, or another gas is specified.

IMPORTANT NOTE: Individually sold i-module sensor assemblies prices do not include the sensor seal (M04682), flexible connector (E07612), or the sensor retaining ring (M04431). These will be needed when adding i-module sensor assemblies to an existing instrument. Only the sensor seal (M04682) needs to be ordered when replacing i-module sensor assemblies.

CSK-02	Tetra Confined Space Kit Package – Includes: Calibration Plate, Portables PC Software (To Allow Unit Connection to a Computer For User Calibration, Unit Re-Configuration, and Downloading Information Stored in the Built-In Datalogger), Wireless IR Reader (Plugs into RS232 Port), Harness Plate, Chest Harness Kit, Shoulder Strap, PC Interface, Crow-Mag and Hard Carrying Case With Foam Inserts for Unit and All Standard & Kit Accessories.	\$ 450.00
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Part Number	Description	Price
Tetra Value Packs – Pumped, Rechargeable Versions.		
TET-01/ABCD	Pumped Rechargeable Battery Tetra with LEL/O2/CO/H2S sensors	\$1100.00
TET-01/ABDX	Pumped Rechargeable Battery Tetra with LEL/O2/H2S sensors	\$ 998.00
TET-01/ABCX	Pumped Rechargeable Battery Tetra with LEL/O2/CO sensors	\$ 998.00
TET-01/ABXX	Pumped Rechargeable Battery Tetra with LEL/O2 sensors	\$ 844.00
Tetra Value Packs – Non Pumped, Rechargeable Versions		
TET-02/ABCD	Non Pumped Rechargeable Battery Tetra with LEL/O2/CO/H2S sensors	\$ 961.00
TET-02/ABDX	Non Pumped Rechargeable Battery Tetra with LEL/O2/H2S sensors	\$ 859.00
TET-02/ABCX	Non Pumped Rechargeable Battery Tetra with LEL/O2/CO sensors	\$ 859.00
TET-02/ABXX	Non Pumped Rechargeable Battery Tetra with LEL/O2 sensors	\$ 757.00
Tetra Battery Chargers		
E011095	Multi-region charger (UK, US, EU, AU)	\$ 46.00
C01866	230V 50/60 Hz in-line charger - no plug	\$ 130.00
C01867	115V 50/60 Hz in-line charger - no plug	\$ 130.00
C01879	90-260V 50-60 Hz in-line with IEC input	\$ 160.00
C02098	Car charger	\$ 130.00
Tetra Accessories		
C01847	Aspirator assembly for non pumped units	\$ 74.00
C01846	Aspirator assembly for pumped units comes w/ 2 meters of hose	\$ 41.00
C01841	Flow plate and gasket (pumped only)	\$ 31.00
C01097	3 ft (1 m) sample probe (Stainless Steel)	\$ 132.00
C01757	Telescopic aspirator probe (Stainless Steel)	\$ 164.00
M04032B	Aspirator hose, black Neoprene, per yard (3 Feet)	\$ 12.00
M04032C	Aspirator hose, clear Tygon, per foot	\$ 13.00
ILF001	Hydrophobic Inline filter	\$ 29.00
ILF005	Hydrophobic Inline filter, quantity of 5	\$ 114.00
FIL29001	Water trap / particulate filter including filter element	\$ 59.00
FIL99008	Filter element for FIL29001, price per element (minimum order qty 10)	\$ 8.00
C03328	Drop line, 6m	\$ 40.00
C01842	Universal harness plate	\$ 41.00
C01844	Chest harness strap kit - consists of two straps	\$ 26.00
C01863	Chest harness kit (included plate and straps)	\$ 66.00
C01843	Shoulder strap	\$ 18.00
C01845	Instrument Carry Case (rechargeable version)	\$ 87.00
C01888	Instrument Carry Case (non-rechargeable version)	\$ 87.00
E07985	Infrared adaptor for PC, plugs into RS232 port (previously MIS26003)	\$ 229.00
C02097	USB to RS232 adapter	\$ 55.00
C01832	Portables PC Software CD	\$ 85.00
C01874	Calibration Flow plate for pumped Tetra pre 1V08 software	\$ 121.00
C01873	Gas test kit magnet (replaces C01697 Crowmag Key)	\$ 43.00
C011005	Calibration Flow plate for pumped Tetra post 1V08 software	\$ 76.00
M04857	Tetra bench holder	\$ 33.00



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Part Number	Description	Price
Tetra Spare Parts		
M07237	Tetra manual English	\$ 18.00
M07238	Tetra manual American	\$ 18.00
M04001	Aspirator bulb	\$ 41.00
S011415	Battery holder	\$ 51.00
M04794	Battery holder enclosure	\$ 12.00
M040032	Charging socket (minimum order quantity 10)	\$ 7.00
M03776	M2x4 Pozidriv (minimum order quantity 10)	\$ 5.00
M05834	3D label, Crowcon (minimum order quantity 8)	\$ 7.00
M04808	Dummy sensor (minimum order quantity 4)	\$ 8.00
E07612	Flexible connector (minimum order quantity 10)	\$ 7.00
E01633	Fuse 125 mA encapsulated red	\$ 15.00
M04682	Sensor sealing ring (minimum order quantity 5)	\$ 7.00
S011399/1	Lower case assembly non-rechargeable	\$ 94.00
S011394/1	Lower case assembly rechargeable/blue	\$ 51.00
E01824	LCD display (Call prior to purchase)	\$ 40.00
S011340	Main and display PCB assembly	\$ 578.00
S012976	Tetra ozone flow plate	\$ 46.00
S011406	Bag of allen keys	\$ 7.00
M03762	Main case bolt (minimum order quantity 10)	\$ 7.00
S011396	Sensor plate assembly, non-pumped	\$ 35.00
M04811	Outlet gasket (minimum order quantity 10)	\$ 7.00
S012054	Spare Tetra pump and sensor plate assembly	\$ 177.00
S013034	Rechargeable lithium ion battery assembly	\$ 109.00
M04431	Sensor clip retaining ring (minimum order quantity 10)	\$ 8.00
S011398	Sensor cover filter assembly	\$ 26.00
C01852	Gore-Tex™ filter - sold as a pair (1 pair needed per unit)	\$ 11.00
M04880	Filter retaining bracket	\$ 7.00
M04796	Sensor plate gasket (minimum order quantity 5)	\$ 7.00
M03735	Sensor plate hex screw (minimum order quantity 10)	\$ 5.00
M04795	Sensor plate seal (minimum order quantity 10)	\$ 7.00
S012161	Sounder (minimum order quantity 5)	\$ 8.00
C01864	Strap for universal harness plate	\$ 21.00
S011397/1	Top molding blue	\$ 26.00
S011798/1	Lower case assembly all orange (USA only)	\$ 54.00
S011799/1	Top molding orange (USA only)	\$ 26.00
M04862	Sensor cover plate orange (USA only)	\$ 12.00
CASE CSK	Hard shell carry case with foam inserts for the confined space kit Case and foam only, no accessories	\$ 150.00