

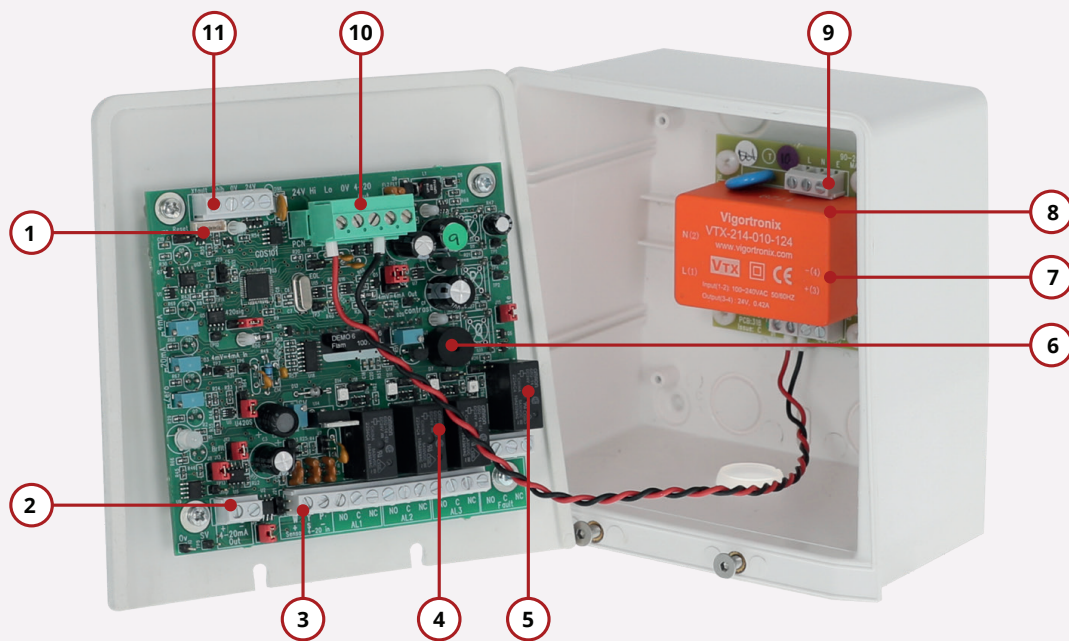
WATCHGAS 101

Controller



The WatchGas 101 is a standalone, self-contained single channel control unit for the detection of Toxic, Oxygen or Flammable gases. The control unit is fully configurable for a single input from either a 4~20mA transmitter or a 3 wire mV device, with internal, aspirated or remote sensor options.

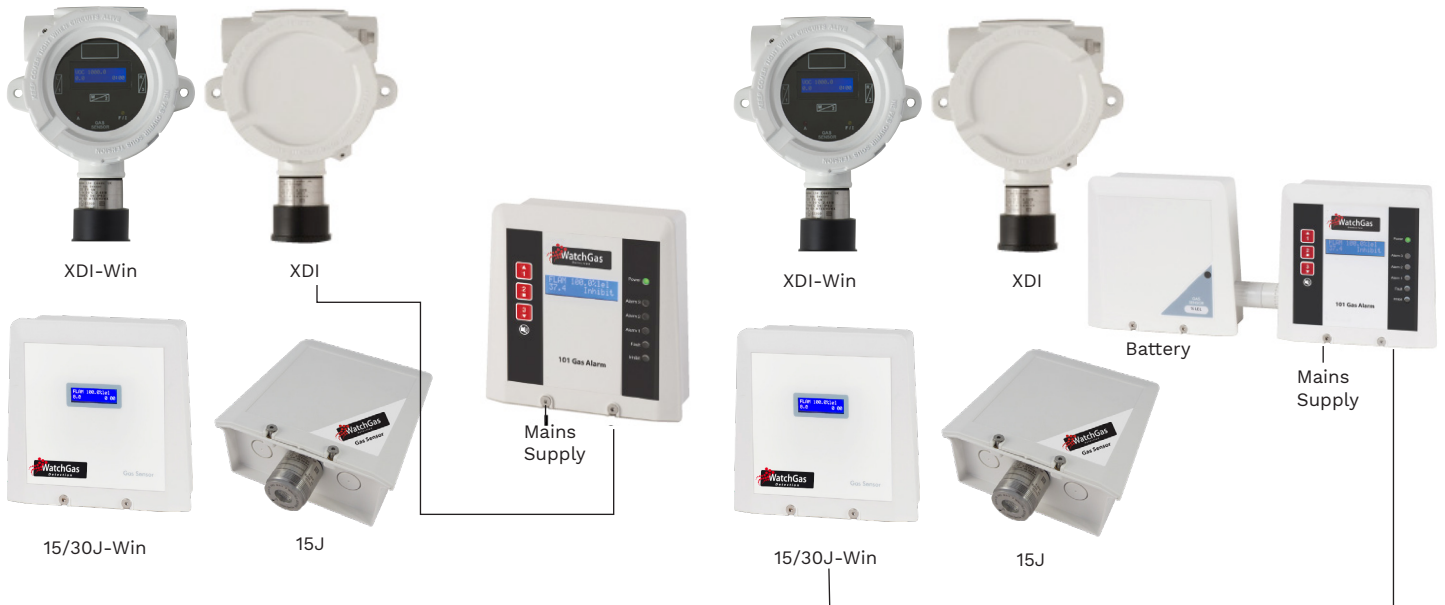
The WatchGas 101 also has the capability to form part of our Combi CANbus addressable network, therefore offering the features of our most advanced gas detection system.



WATCHGAS 404+			
1	Serial programming interface	7	24vDC Output (x2)
2	4~20mA Output	8	Power supply
3	Sensor input	9	AC input 85~260v AC
4	Lo, Hi and over range relays	10	24v DC input
5	Fault relay	11	Fault input and 24vDC output
6	Sounder		

CONTROLLER CONFIGURATION

REMOTE SENSOR



INTERNAL SENSOR



INTERNAL ASPIRATED SENSOR UNIT



AVAILABLE GASES

GASES	RELATIVE DENSITY AIR =1	UNITS	STANDARD RANGE	ALARM LEVEL 1	ALARM LEVEL 2
O ₂ Oxygen	1.105	% Vol	0-25%	19%	17%
CO Carbon Monoxide	0.96	ppm	0~200 ppm	20 ppm	100 ppm
SO ₂ Sulfur Dioxide	2.26	ppm	0~5 ppm	0.5 ppm	1 ppm
NO Nitric Oxide	1.03	ppm	0~10 ppm	2 ppm	3 ppm
NO ₂ Nitrogen Dioxide	2.62	ppm	0~5 ppm	0.5 ppm	1 ppm
CL Chlorine	2.41	ppm	0~5 ppm	0.3 ppm	0.5 ppm
ClO ₂ Chlorine Dioxide	2.33	ppm	0~1 ppm	0.1 ppm	0.3 ppm
H ₂ Hydrogen	0.06	ppm	0~2000 ppm	250 ppm	500 ppm
HCN Hydrogen Cyanide	0.93	ppm	0~10 ppm	0.9 ppm	4.5 ppm
H ₂ S Hydrogen Sulphide	1.18	ppm	0~50 ppm	5 ppm	10 ppm
HCL Hydrogen Chloride	1.26	ppm	0~10 ppm	1 ppm	5 ppm
NH ₃ Ammonia	0.58	ppm	0~100 ppm	25 ppm	35 ppm
O ₃ Ozone	1.66	ppm	0~1 ppm	0.1 ppm	0.2 ppm
HF Hydrogen Fluoride	0.7	ppm	0~10 ppm	1.8 ppm	3 ppm
CH ₄ Methane	0.55	% LEL	0~100%	20%	40%
C ₃ H ₈ Propane	1.55	% LEL	0~100%	20%	40%
C ₄ H ₁₀ Butane	2.11	% LEL	0~100%	20%	40%
C ₅ H ₁₂ Pentane	2.48	% LEL	0~100%	20%	40%
H ₂ Hydrogen	0.06	% LEL	0~100%	20%	40%
CO ₂ Carbon Dioxide	1.52	% Vol	0-2%	0.50%	1.50%
CH ₄ Methane	0.55	% LEL	0~100%	20%	40%
C ₃ H ₈ Propane	1.55	% LEL	0~100%	20%	40%
C ₄ H ₁₀ Butane	2.11	% LEL	0~100%	20%	40%
C ₅ H ₁₂ Pentane	2.48	% LEL	0~100%	20%	40%
LPG	1.55	% LEL	0~100%	20%	40%
C ₂ H ₆₀ Ethanol	1.51	% LEL	0~100%	20%	40%
C ₄ H ₈ Iso-butylene	1.94	ppm	200 ppm	20 ppm	40 ppm

SPECIFICATION

	WatchGas 101	WatchGas 101 Panel Mount
CHANNELS	Single Channel	
MEASUREMENTS	Combustible Gas – L.E.L, % Vol. Toxic Gas – ppm, % Vol. Oxygen - % Vol. – Depletion / Enrichment Refrigerant – ppm Any 4~20mA Transmitter	
SENSOR INPUTS	Bridge type 3 wire mv (Catalytic) 2 or 3 wire 4~20mA (Electrochemical) 4~20mA (Infrared / Catalytic / PID / Semiconductor)	
OUTPUTS	4-20mA - Sink/Source 500mA @ 24v DC CANbus Inhibit active indicator O/C 100mA – 24vDC	
RELAYS	1, 2, 3 and fault alarm relays (4) – S.P.C.O normally, de-energised – energised option, latched or unlatched All contacts rated 3A-230v AC	
SENSOR CABLE	3 Core 1.5mm ² screened 1.5km	
POWER	24v nominal 18v to 30vDC 85~260v AC 50/60Hz The two voltages may be utilised simultaneously – standby supply 4 Watts – Full Alarm	24v nominal 18v to 30v DC 4 Watts – Full Alarm
PANEL INDICATION	Two line alpha numeric back lit display Power – Green LED Alarms 1, 2, 3 Red LED's Fault – Amber LED Alarms Inhibit – Amber LED	
AUDIBLE ALARM	1, 2, 3, and Fault Alarms – Mutable 85dB @ 10cm	
DATA LOGGING	Intervals – Variable Time Rollover / Stop Storage – 2,880 Readings *Requires RS232 Lead, PC or Laptop (dedicated)	
OPERATING TEMPERATURE	-10 to + 50°C	
STORAGE TEMPERATURE	+5°C to +55°C	
HUMIDITY	0-95 non condensing	
INGRESS PROTECTION	IP64	IP50
DIMENSIONS	24vDC Version: H-145 L-145 D-65mm AC Mains Version: H-145 L-145 D-100mm	H-117 W-115 D-53mm Panel Cut Out: W 105 H 90mm
WEIGHT	0.8KG	0.26KG
ENCLOSURE MATERIAL	ABS Flame Retardant FR40 – Lid Screws M4SS	
STANDARDS	EMC BS EN 50270 Low Voltage BS EN 61010-1	

WATCHGAS 101 OPTIONS



WatchGas 101

- Suited to a wide range of industries
- Sensor configuration options - remote, internal and aspirated



WatchGas 101 Panel Mount

- Suited to a wide range of industries
- Sensor configuration options - remote, internal and aspirated



WatchGas 101 Double Box Arrangement

The WatchGas 101 double box arrangement is used for the following requirements:

- WatchGas 101 mains version with aspirated sensor
- WatchGas 101 mains version with standby battery

FOR MORE INFORMATION

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WatchGas is dedicated to continuously improving its products. Therefore, the specifications and features mentioned in this datasheet are subject to change without prior notice.

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