



The Combi range of multi-channel control systems offers an incredibly versatile approach whilst ensuring a reliable safety system across all industries and applications. Having the capacity to monitor up to 64 addressable and 16 direct sensors, 8 of which will accept the CC-1 bridge converter module. Larger system requirements can also be met with over 1000 addressable sensors possible through a networked Combi solution.

Designed to take the user experience to the next level, the Combi can be installed in all customer environments with configurations available as a wall mounted unit, 19" rack system, panel and din rail mount.

Combi features a vast range of optional equipment including Combi software, enabling full data logging facilities with system management, providing real time views showing sensor locations, alarm status and actual gas values.

Choosing the gas detection system for your specific requirements

Designed to operate across multiple industries and applications, the unique system architecture offers flexibility with up to six different control panel options. The intuitive user interface sees parameters set via the front panel or alternatively via PC, and detectors supplied pre-calibrated. Combi can be customised to meet your specific requirements, without the need for extensive cabling, providing a comprehensive, highly configurable safety system.

*Dependent on chosen model

COMBI 80

- 1 to 64 addressable sensors
- 1-16 direct 4~20 mA sensors
- CC-1 bridge module – mV to 4~20mA converter
- Network up to 16 controllers enabling up to 1024 addressable sensors + direct sensors

COMBI 19" RACK SYSTEM (COMBI 80, 64, 16)

- Lightweight aluminium 19" Rack
- 1 to 64 addressable sensors
- 1-16 direct 4~20 mA sensors
- CC-1 bridge module – mV to 4~20mA converter
- 16 controller network

COMBI 64

- 1 to 64 addressable sensors
- Single 4 core sensor network
- 16 controller network

COMBI DIN RAIL MOUNT (COMBI 64)

- Robust mild steel din rail mount to save time and work
- 1 to 64 addressable sensors
- Single 4 core sensor network

COMBI 16

- 1-16 direct 4~20 mA sensors
- CC-1 bridge module – mV to 4~20mA converter
- 2/3 core sensor cable network
- 16 controller network

COMBI PANEL MOUNT (COMBI 64)

- Clean, flush finish within an existing panel or door
- 1 to 64 addressable sensors
- Single 4 core sensor network

COMBI INDUSTRIAL WALL MOUNT ENCLOSURES

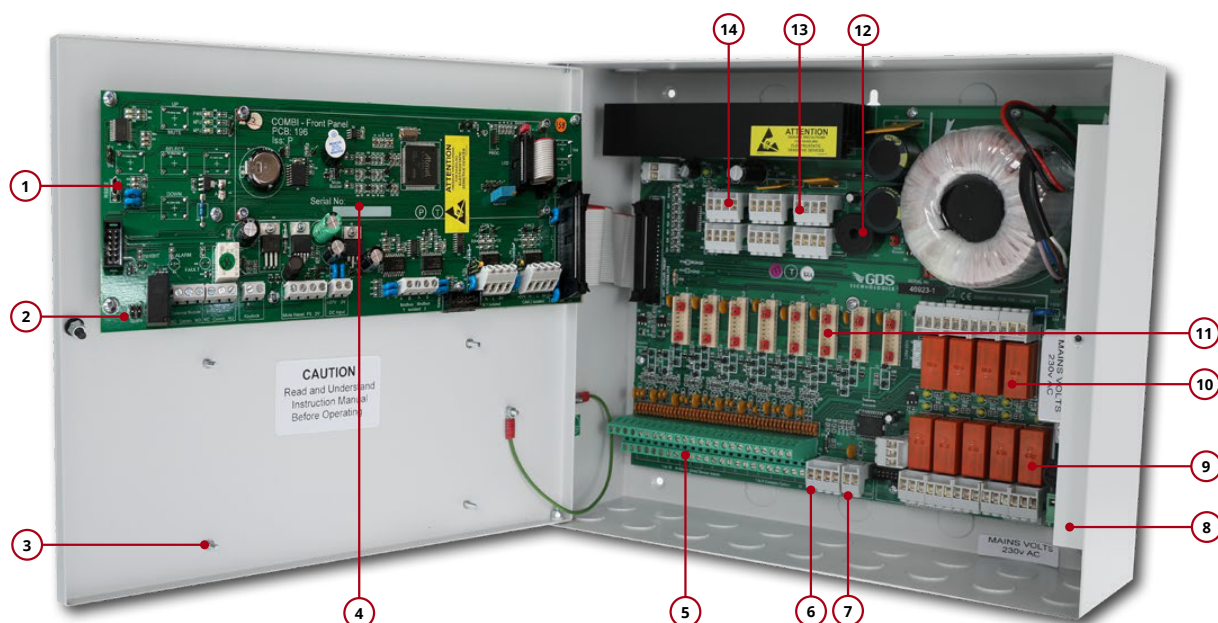
Our wall mount enclosures are suitable for housing the following Combi control units – 80, 64 and 16.



The two Combi Industrial enclosures offer:

- A higher level of ingress protection – IP63
- Key lock door
- Will accommodate all associated Combi equipment (see configuration sheet)
- Increased mechanical strength
- More space for industrial wiring and cable glanding
- Allows additional box extensions for control equipment
- User friendly

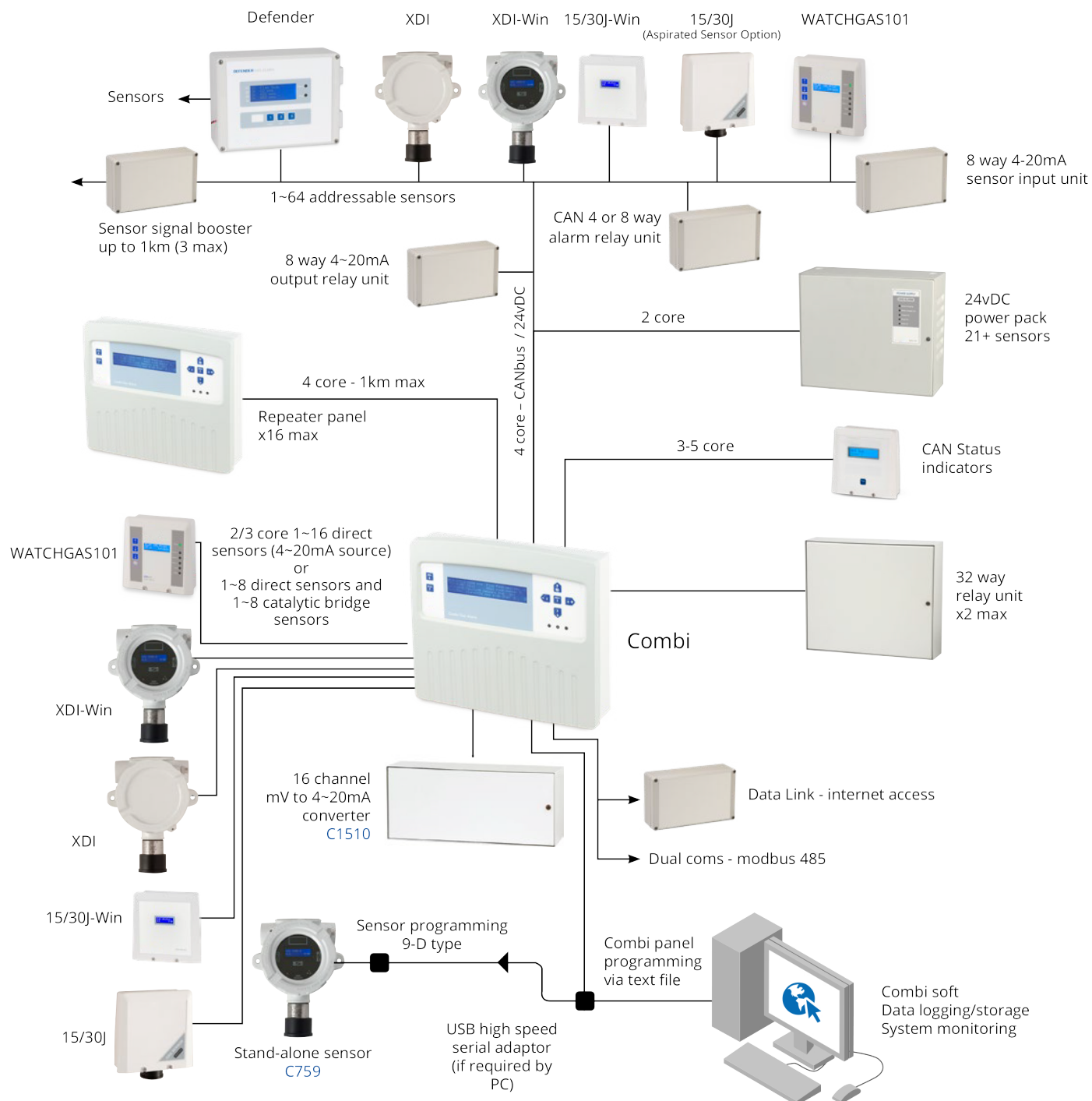
COMBI FEATURES



WATCHGAS COMBI 80 CONTROL UNIT			
1	USB programmable input	8	AC Input
2	Front panel status LCD's	9	Global sounder relay
3	Optional battery back up mounting	10	Standard 8 relays
4	Front panel display PCB	11	Optional 1~8 plug in catalytic module ports
5	1~16 4~20mA direct detector input connections	12	Sounder
6	DC Input	13	64 Addressable CANbus detector input connections
7	DC Output	14	MODbus Connections

OPTIONAL EQUIPMENT	
Network Controller	8 Way 4~20mA Output Unit
Repeater Panel	4 Way Alarm Relay Unit
CAN Status Indicator	8 Way Alarm Relay Unit
Combi Soft	32 Way Alarm Relay Unit
Data Link	Sensor Signal Booster 1K+
CC-1 bridge module – mV to 4~20mA converter	Weatherproof Over housing IP66
DC Output CC-16 multi bridge module unit	WATCHGAS707 Battery Back-Up 11A @ 24v DC
8 Way 4~20mA Input CAN Signal Converter	

COMBI NETWORK CONTROLLER CONFIGURATION



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	0~1ppm	0.1 ppm	0.3ppm
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	10ppm
HCL Hydrogen Chloride	1.26	ppm	0~10 ppm	1 ppm	5 ppm
NH ₃ Ammonia	0.58	ppm	0~100 ppm	25 ppm	35ppm
O ₃ Ozone	1.66	ppm	0~1 ppm	0.1 ppm	0.2ppm
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

	Combi 80	Combi 64	Combi 16	Combi Din Rail Mount	Combi Panel Mount	Combi 19” Rack
SENSORS	1-64 addressable 4 wire 16 direct 4~20mA - 3 wire 1~8 optional mV bridge inputs 3 wire	1-64 addressable 4 wire	16 direct 4~20mA 1~8 optional mV bridge inputs 3 wire	1-64 addressable 4 wire		1-64 addressable 4 wire 16 direct 4~20mA - 3 wire 1~8 optional mV bridge inputs 3 wire
MEASUREMENTS	Combustible Gas – L.E.L, % Vol. Toxic Gas – ppm Oxygen - % Vol. – Depletion / Enrichment Refrigerant – ppm Any 4~20mA Transmitter					
SENSOR TYPES	Catalytic, Electrochemical, Infrared, PID, Semiconductor					
CONTROL PANELS AVAILABLE	Wall Mount Unit 19” Rack System	Wall Mount Unit 19” Rack System Panel Mount Din Rail Mount	Wall Mount Unit 19” Rack System	Wall Mount Unit 19” Rack System Panel Mount Din Rail Mount		Wall Mount Unit 19” Rack System
OUTPUTS	MODbus 8 User Selectable Relays Optional: 4~20mA / Up to 64 Relays					
RELAYS	Global relay S.P.C.O - Inhibit relay S.P.C.O 8 user selectable relays Type: 2 D.P.C.O/6 S.P.C.O rated @ 5A-230v AC Relay Modes: NE/ND Delay See options Global relay S.P.C.O Inhibit relay S.P.C.O Power 230/115v AC or 24v			See options		Global relay S.P.C.O Inhibit relay S.P.C.O
POWER	230/115v AC or 24v DC ± 15%Control unit 7.5w quiescent 17w full alarm Sensor – 1.25w Internal power supply 20 sensors max					
PANEL INDICATION	Dot matrix LCD 4 line 40 character-indicates sensor location, gas type, alarm status, system fault, sensor line fault, sensor fault, inhibit, real time clock, event memory Red LED – global alarm Amber LED – global fault Amber LED - inhibit					
AUDIBLE ALARM	Alarm / Fault – Permanent Mute Option 68dB @ 1m					
DIGITAL COMMUNICATIONS	USB Data Log / Event Log RS485 x 2 – MODbus					
EVENT LOGGING	Combi Soft – Full data logging management tool Individual sensor logging – 1-60 min storage readings Data Link – Remote logging					
OPERATING TEMPERATURE	-10°C to +50°C					
STORAGE TEMPERATURE	+5°C to +55°C					
HUMIDITY	0-95 non condensing					
INGRESS PROTECTION	IP52 *IP65 available with over housing* IP63 - Combi Industrial			IP52	IP50	IP50
DIMENSIONS	Standard: 315W x 265H x 95D Combi Industrial Box 1: 386W x 280H x 137D Combi Industrial Box 2: 386W x 500H x 137D			295W x 120H x 80D	310W x 115H x 50D	19” x 3U x 300mm
WEIGHT	5.5KG	4.5KG	5.5KG	1.5KG	0.7KG	6KG
ENCLOSURE	Ash Grey BSA01, Mild Steel Powder Coat				Brushed Aluminium	
STANDARDS	EMC BSEN 50270 Low Voltage BS EN 61010-1					