



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

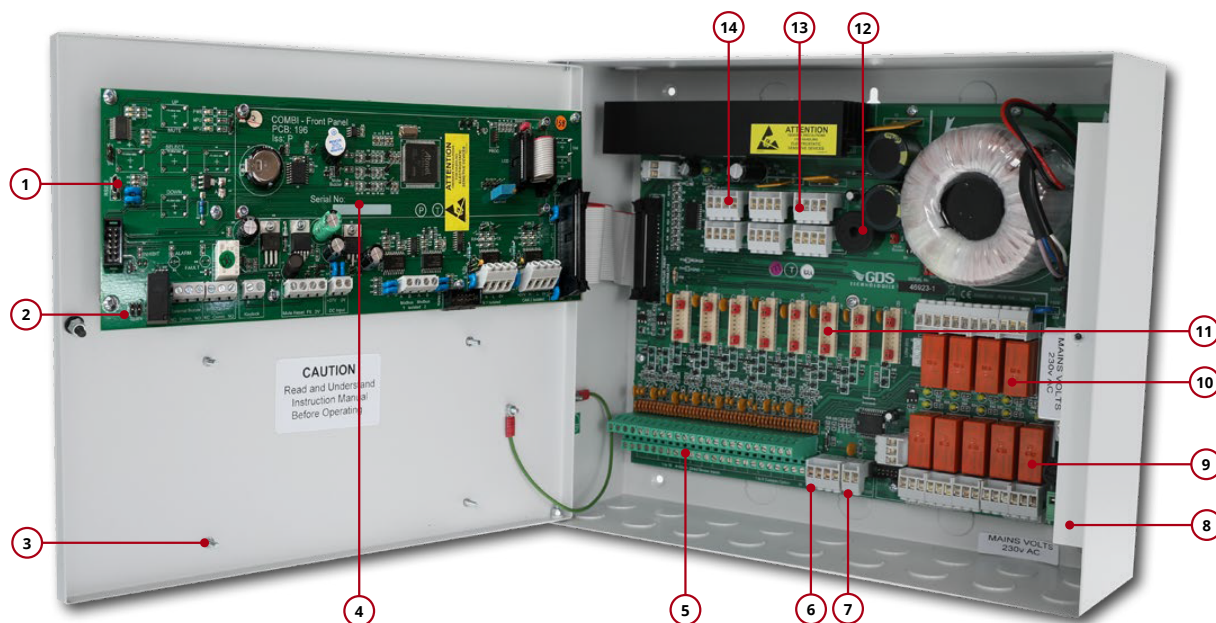
Our wall mount enclosures are suitable for housing the following Combi control units – 80, 64 and 16.



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

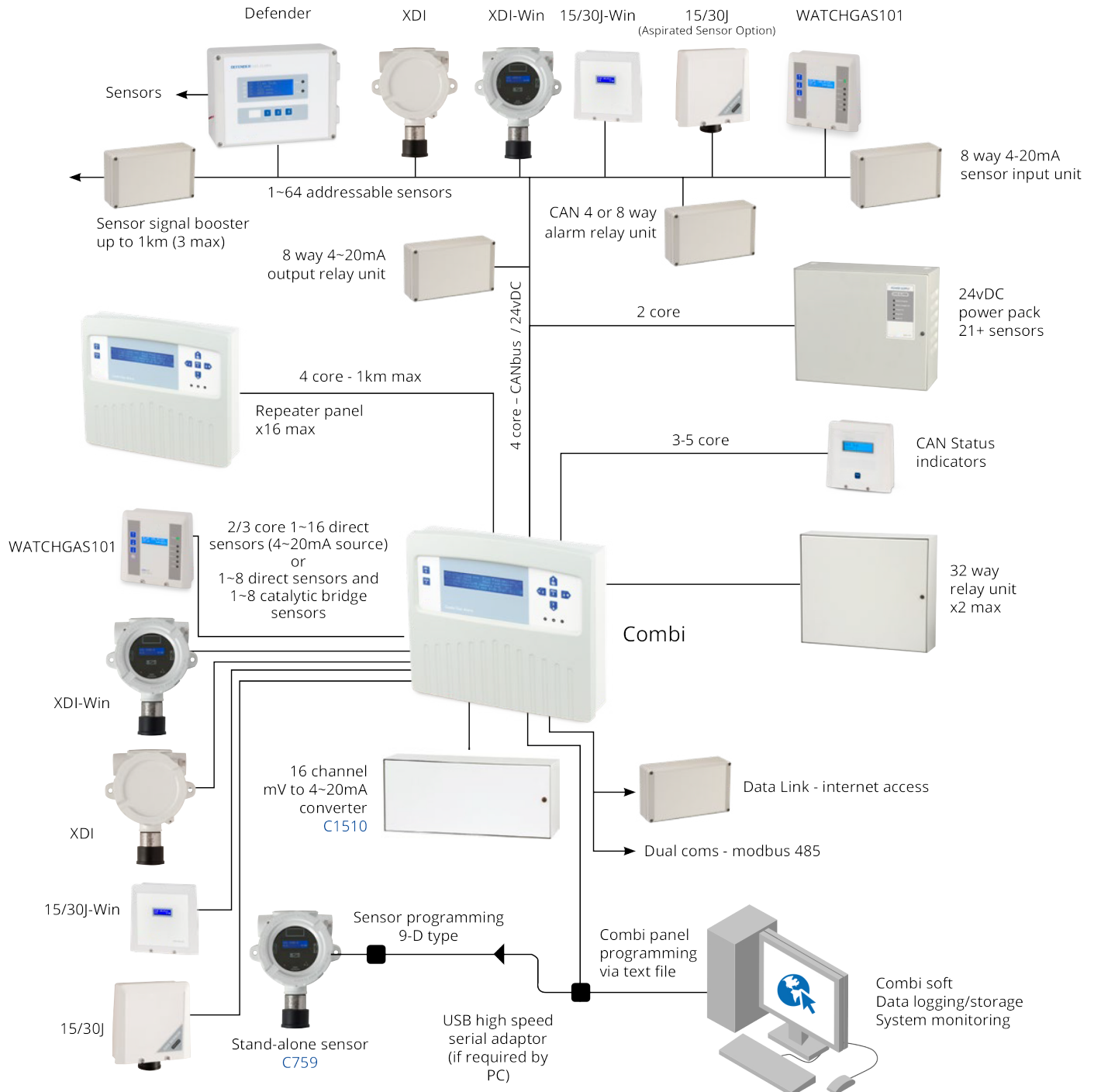
COMBI FEATURES



| 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% |
| 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 | | | | | |