

### System Features:

- 1 to 64 addressable sensors
- 1-16 direct 4~20mA sensors - 2/3 wire
- 1 - 8 plug in direct catalytic cards
- Network up to 16 controllers enabling up to 1024 addressable sensors + direct sensors
- Single 4 core sensor network (addressable)
- Parameter set up via pc or front panel
- 3 alarm levels with time to alarm option
- Addressable relay module - 4, 8 and 32 way option
- Continuous data logging via pc - option (S4S Guardian® Plus software)
- Automatic safety check diagnostics/system surveillance
- System management via remote access



S4S Guardian® Plus has been designed to operate in the full range of environments from commercial premises through to heavy industrial applications which may require hazardous area sensing. Typical monitor locations are - public buildings, car parks, tunnels, breweries, boiler plant rooms, water treatment works, H&V control, manufacturing, process plants, horticulture, hotels, offices.

### Operation

Each gas sensor continuously monitors the atmosphere reporting any hazardous conditions to the control unit for display by the alpha numeric screen indicating the reporting sensor, gas type, concentration and alarm status. Alarm levels that are exceeded will automatically activate a variety of signal outputs including analogue/digital data and user selectable relays.

S4S Guardian® Plus system operates on a 4-core (addressable) or 2/3 core (direct) cable network and has the capacity to monitor up to 64 addressable and 16 direct sensors 8 of which may be converted to accept mV catalytic sensors. Larger systems offering unlimited sensors can be achieved using multiple Guardian Plus units housed in a 19" rack based system or a network controller.

S4S Guardian® - Plus is supplied ready to use with pre-calibrated gas sensors and provides for additional sensors that can be easily added to any point of the network.

Optional software (S4S Guardian® Plus Software) allows full data logging facilities with system management providing real time views showing sensor locations, alarms status and actual gas values.

### Sensor points

1-64 addressable – CANbus – and/or  
16 direct 4~20mA

### Measurements

Combustible Gas - L.E.L., % vol  
Toxic Gas - ppm, % vol  
Oxygen - % vol - Depletion/Enrichment  
Refrigerant - ppm  
Any 4~20mA transmitter

### Indicators - control unit concentration

Dot matrix LCD 4 line 40 character -  
indicating sensor location, gas type, (rising  
or falling alarms), 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

### Outputs

8 user selectable zone/voting – with NE/ND option and  
delay to de-energise

Relay contacts - 2 D.P.C.O / 6 S.P.C.O. rated  
@ 5A-230v AC

Factory set 1 common low alarm D.P.C.O or group 1  
1 common high alarm D.P.C.O or group 2  
1 common overrange S.P.C.O or group 3  
1 common fault alarm S.P.C.O or group 4  
4 user selectable S.P.C.O groups 5 to 8

General alarm relay - resetable S.P.C.O. for sounders etc. Optional -  
2 x 32 relays - first 16 programmable with pattern/event with NE/  
ND options and delay to de-energise - 48 are single event

Optional - remote addressable 4 way relay unit

RS232 data log - event log Modbus - RS485 x2

Guardian Plus Soft: full data logging /management tool - option.

Individual sensor logging - intervals 1-60 mins storage readings 2880

NOTE: This datasheet is non-contractual

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**Audible alarm**

Alarm/Fault - permanent mute option  
68dBs @ 1m

**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. 21+ sensors - 11A/24vDC Auxiliary Power Pack required C1541/C1293

**Sensor Cable - Addressable / Direct**

Main network - 4 core (2 power - 2 comms)  
- Addressable  
2/3 core (1.5mm screened max length 1km)  
- Direct 4~20mA or mV  
Optional signal booster per additional 1km

**Miscellaneous**

Enclosure cable entry - bottom, rear, top  
Remote reset/mute

**Options**

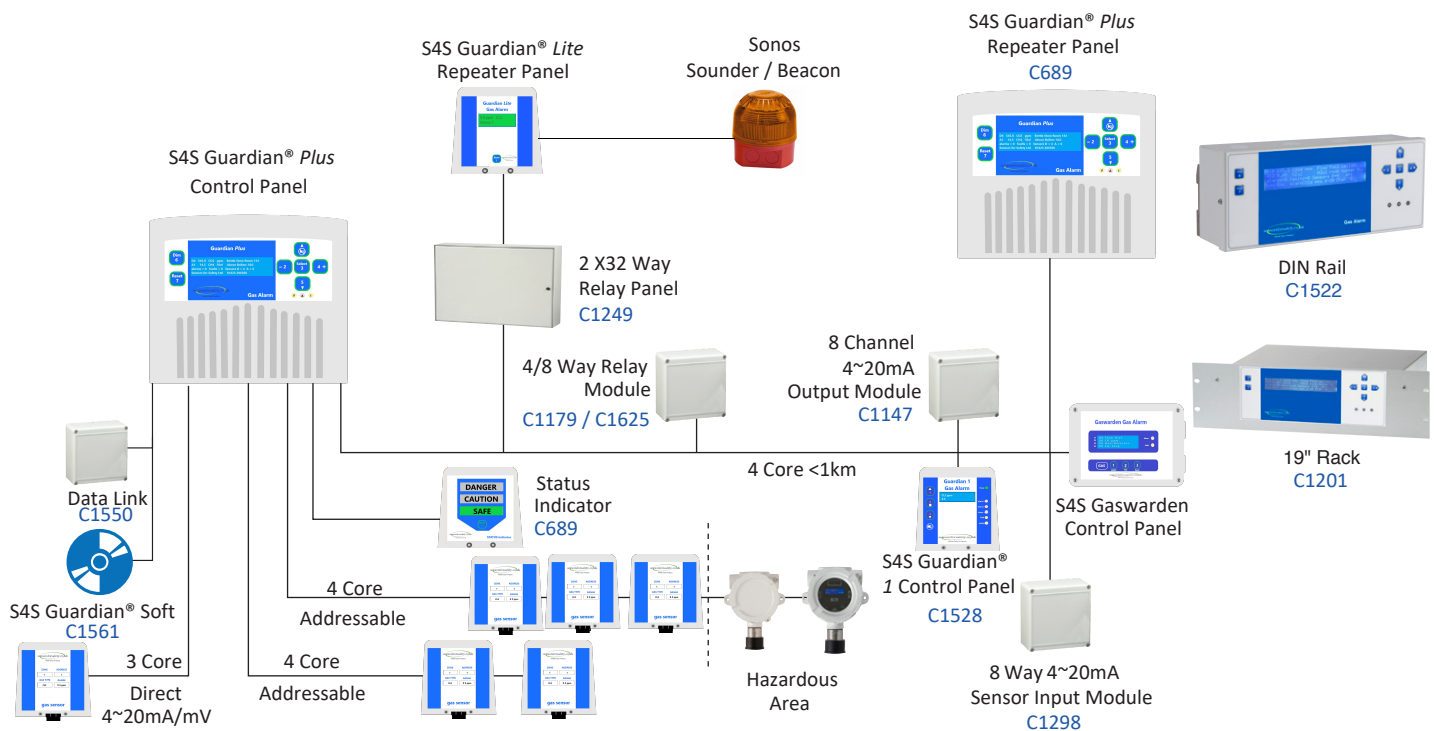
Control panel repeater  
Canbus repeater panel with selectable channel readout - (S4S Guardian® - Lite)  
Status Indicator Panel  
Sonos Sounder / Beacon  
1-8 plug in catalytic cards  
16 way mV catalytic converter  
8 way 4~20mA input CAN signal converter 8 way 4~20mA output module  
4 way alarm relay module  
8 way alarm relay module  
2 x 32 way alarm relay panel  
Sensor signal booster 1K+  
Password protection - user mode/engineers mode LCD and LED dimming

**Environmental**

Control unit - IP52 - wall mount  
Optional overhousing - IP65  
Operating temperature: -10 to +50C

**Dimensions**

315W x 265H x 95D - S4S Guardian® Plus panel  
19" x 3U x 300mm Deep - rack panel  
295W 120H x 80D Din rail module  
315W x 265H x 95D - Auxiliary power pack



For S4S Guardian® Plus Controller configuration see S4S1046.

For S4S Guardian® Plus Network controller configuration see S4S1148.



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