



# LabSense<sup>TM</sup> PLUS

VENTILATION CONTROLLER & GAS INTERLOCK

# TRENT

MAKING SENSE OF CONTROLS

**LabSense Plus** is an electronic gas interlock with ventilation control for use in teaching laboratories.

Functions:

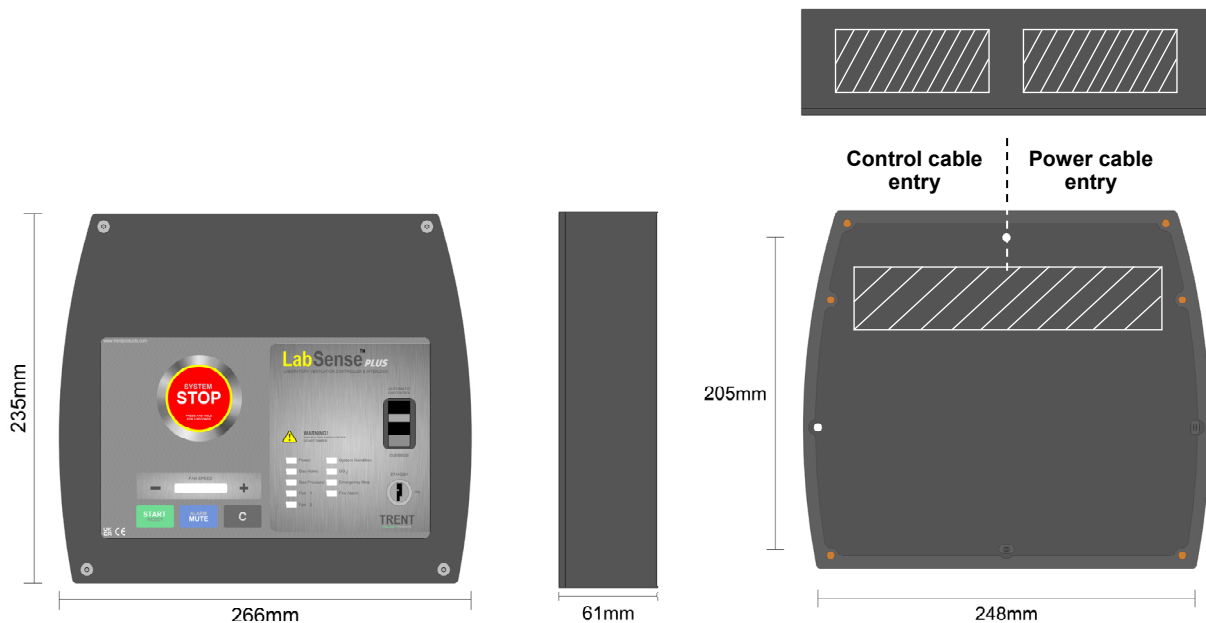
- Safe isolation when system is unsupervised.
- Gas supply interlocked to room CO<sub>2</sub> levels.
- Gas pressure proving.
- Automatic and manual fan speed control.
- Fan health monitoring with BMS output.
- Fire alarm interlock.
- Emergency stop circuit interlock.

Compliant with the following standards:

- IGEM/UP/2 Ed.3:2014
- IGEM/UP/11 Ed.3:2018
- IGEM/UP/19:2015
- Building Bulletin 101:2018
- Building Bulletin 100:2007



## Dimensions and Mounting Details



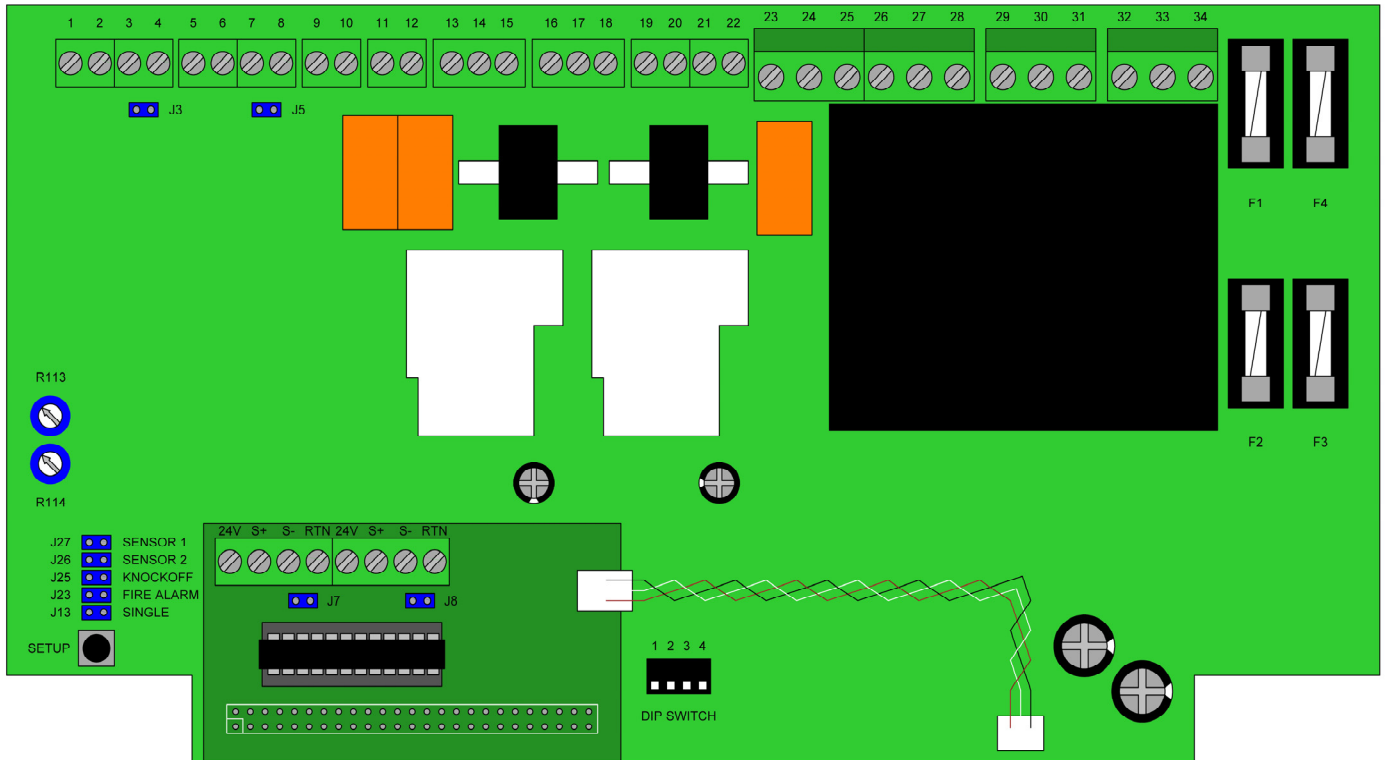
Proudly designed and manufactured in the UK.

Trent Control Panels Limited

Trent House, Dewsbury Road, Fenton, Stoke-on-Trent. ST4 2TE

For more information call our Technical Team on 01782 844688 (Option 2)

## PCB Layout



## Technical Data

<b>Power consumption (unit)</b>	5W
<b>Power consumption (CO<sub>2</sub>/temperature sensor)</b>	2.4W
<b>Power consumption (Gas pressure transducer)</b>	<0.24W
<b>Transformer power rating</b>	10VA
<b>Enclosure material</b>	High Impact Polystyrene
<b>Operating temperature</b>	-20 to 60°C
<b>Ingress protection rating</b>	IP40
<b>Recommended control cable</b>	Belden 8723 or equivalent

<b>Power terminals</b>	<b>Number</b>	<b>Spec.</b> Max torque - 0.6Nm, Max conductor - Flexible 4mm <sup>2</sup> , Solid
Power supply	32 ( E ) 33 ( L ) 34 ( N )	250 V ~ ( F4 - 1A fuse, Type T)
Power output 1 (Fan 1)	23 ( E ) 24 ( L ) 25 ( N )	8.3 A 250 V ~ ( F2 - 10A fuse, Type T)
Power output 2 (Fan 2)	26 ( E ) 27 ( L ) 28 ( N )	8.3 A 250 V ~ ( F3 - 10A fuse, Type T)
Power output 3 (Gas valve)	29 ( E ) 30 ( L ) 31 ( N )	6.3 A 250 V ~ ( F1 - 10A fuse, Type F)

<b>Control terminals</b>	<b>Number</b>	<b>Spec.</b> Max torque - 0.6Nm, Max conductor - flexible / solid 1.5mm <sup>2</sup>
Analogue input 1 (Gas pressure)	1 (24Vdc) 2 (0-10Vdc) 3 (0Vdc)	Range 0-50mBar
Analogue input 2 (CO <sub>2</sub> )	5 (24Vdc) 6 (0-10Vdc) 7 (0Vdc)	Range 0-5000ppm
Analogue input 3 (Speed selector)	S- (-12Vdc), RTN (0Vdc)	Switched
Analogue input 4 (Temperature)	S+ (0-10Vdc), S- (0Vdc)	Range 0-100°C
Digital input 1 (Fire alarm)	9 & 10	Switched (2Vdc)
Digital input 2 (E-stop)	11 & 12	Switched (2Vdc)
Analogue output 1 (Fan 1 speed)	13 (0-10Vdc) 14 (0Vdc) 15 (SCR)	0-10Vdc
Analogue output 2 (Fan 2 speed)	16 (0-10Vdc) 17 (0Vdc) 18 (SCR)	0-10Vdc
Discrete output 1 (Fan enable)	19 & 20	Switched VFC (24Vac/dc Max)
Discrete output 2 (Fan early warn-)	21 & 22	Switched VFC (24Vac/dc Max)

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