

# Guardscan GS120 Type 2 Safety Light Curtains

## Cost effective solution for medium-risk safety applications

Guardscan GS120 light curtains offer a cost effective alternative for lower risk applications which do not require the advanced capabilities of the Guardscan GS140.

### Choice of diagnostic display

As well as PNP outputs, the GS120 also has a choice of LED or full diagnostic display. The LED version will show whether the curtain is clear or blocked by the use of coloured LED's. The

DIAG option has an alpha-numeric display, providing information on output status, restart mode, the identity of the first obstructed beam as well as error codes for internal/external faults.

The GS120 is ideal for medium risk applications such as; packing/wrapping machines, product handling and finishing, storage systems and textile machines.

### Looking for more information?

Call our Technical Support Team on 01254 685900 for more details and to see if the GS120 is suitable for your specific application. For information on the Type 4 GS140 range, or details of our range of light curtain accessories, please request a copy of the relevant datasheet.

### Features include

- Approved to Cat 3 (EN954-1), Type 2 (EN61496)
- 30mm or 70mm detection
- 2, 3 or 4 multi-beam version available
- Compact, rugged design
- Easy to install
- British designed and manufactured
- Optional diagnostic display

**GUARDSCAN**

**GS120**

## GS120 Technical Specification

### Common specification

<b>Curtain lengths</b>	..... up to 1800mm
<b>Cross section</b>	..... 36mm x 45mm
<b>Response times</b>	.....
30mm detection -	18ms (up to 600mm curtain plus 4ms for each additional 200mm of curtain)
70mm detection -	18ms (up to 1800mm curtain plus 4ms for each additional 600mm of curtain)
<b>Wavelength</b>	..... 880nm
<b>Enclosure rating</b>	..... IP65
<b>Effective aperture angle</b>	..... +/- 5°
<b>Safety outputs</b>	..... Solid state PNP 100mA maximum
<b>Supply voltage</b>	..... 24Vd.c.
<b>Power consumption</b>	..... < 12V A

### Standard GS120 light curtains

<b>Detection capability</b>	..... 30 or 70mm
<b>Operating range</b>	..... 1.5m

### Multi-beam GS120 light curtains

<b>Number of beams</b>	..... 2, 3 or 4
<b>Operating range</b>	..... 30m
<b>Beam spacing</b>	..... 2 beam - 0.5m 3 beam - 0.4m, 4 beam - 0.3m

### Safety standards/approvals (by TÜV Germany)

<b>IEC/EN61496</b>	..... Parts 1 & 2 Type 2
<b>EN954-1</b>	..... Category 3



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control & safety



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# How to order GSI20 light curtains

Light curtain order code: **GSI20 / PNP / S / I200 / 70 / LED / AB**

**Output Type** \_\_\_\_\_

PNP = 2 x PNP outputs, SSR = 2 x solid state relays

**Curtain Type** \_\_\_\_\_

S=Single, M=Master, A=Slave, D=Double-ended slave

**Protection Height (mm)** \_\_\_\_\_

Up to 1800mm

**Detection Capability (mm)** \_\_\_\_\_

30 = 30mm, 70 = 70mm

**Curtain Display** \_\_\_\_\_

LED - Discrete LED's, DIAG - Dot Matrix Diagnostic Display

**Bracket Type (AB, CB or EB)** \_\_\_\_\_

Guardscan GSI20 light curtains are available in several different variants. Our order code generator quickly helps you to select the correct unit for your specific requirements.

Decide on the size and specification of the light curtain you need and complete the order code as shown here. We will then be able to provide an accurate quote. Alternatively, our Tech Support team on 01254 685900 will be happy to help you specify the right light curtain.

## Ordering multi-beam light curtains

Light curtain order code: **GSI20 / S / 3 / 30 / LED / AB**

**Curtain Type** \_\_\_\_\_

S=Single, M=Master, A=Slave, D=Double-ended slave

**Number of beams** \_\_\_\_\_

2, 3 or 4

**Operating Range (m)** \_\_\_\_\_

30 = 0.5 - 30m

**Curtain Display** \_\_\_\_\_

LED - Discrete LED's, DIAG - Dot Matrix Diagnostic Display

**Bracket Type (AB, CB or EB)** \_\_\_\_\_

This example is a 3 beam light curtain with LED display & AB bracket (supplied as standard)

## Don't forget to order your cables

Order Code	Description	Cable Length
Emittercable10m	Emitter Cable	10m
Receivercable10m	Receiver Cable	10m
Slavecable300mm	Slave Cable	0.3m

See our accessory datasheet for our range of controllers, power supplies and other accessories.



## Option/feature availability on GSI20 and GSI40

### Guardscan GSI20 (Type 2)

Curtain Type	Beam Blanking	Blue-view	Diagnostics		Aux	EN61508 Approval
			Display	PC Software		
30mm	✗	✗	✓	✗	✓	✗
70mm	✗	✗	✓	✗	✓	✗
Multi-beam	✗	✗	✓	✗	✓	✗

If you require Beam Blanking, Blueview Alignment Tool, Laptop diagnostics or EN61508 approval, you will need to order the Guardscan GSI40 light curtain

### Guardscan GSI40 (Type 4)

Curtain Type	Beam Blanking	Blue-view	Diagnostics		Aux	EN61508 Approval
			Display	PC Software		
14mm	✓	✗	✓	✓	✓	✓
30mm	✓	✓	✓	✓	✓	✓
70mm	✓	✓	✓	✓	✓	✓
Multi-beam	✗	✓	✓	✓	✓	✓

## Light Curtain Application Information

The overall safety level which can be achieved by using light curtains is affected by:

- The machine characteristics e.g. the machine stopping time
- Installer/designer's safety knowledge
- The safety integrity of the interface to the machine control system
- The positioning of the light curtain

### Light Curtain Application Information HSG180

Application of electro-sensitive protective equipment using light curtains and light beam devices to machinery. (HSE)

### ISO 13855/BS999: Safety of Machinery

The positioning of protective equipment in respect of approach speeds of parts of the human body. (BSI)

### DD CLC/TS 62046: 2008

Safety of Machinery - Application of protective

equipment to detect the presence of persons (BSI).

### Guidance specific to the design of the safety related control system; EN954-1: 2006

Safety of machinery - Safety-related parts of control systems (valid until end Nov 2009).

### EN ISO 13849-1: 2006

Safety of machinery - Safety-related parts of control systems (replaces EN954-1 above).

