



PART OF THE AIRDRI GROUP

Formula Systems.

Experts in elevator safety technologies.

Award-winning elevator safety technologies that save businesses time and money - and work for everyone.



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Introducing Formula Systems

Pioneers of elevator light curtains

Founded in 1983, Formula Systems is now internationally recognized as one of the world's leading designers and manufacturers of infra-red door protection systems and speech units.

Our engineers deliver unrivaled innovation in the design of code compliant products compatible with the latest global elevator designs.

Formula Systems is part of the Airdri Group, a family-owned engineering business founded in Oxford, UK in 1974. Under the wider Group, Formula Systems has grown into a global elevator sensor technology business with operations across the UK, USA and Asia.

The product range – including the flagship Vision Plus sensor system, the SafeScreen infra-red light curtain for North America, and the SlimScreen infra-red light curtain for Europe and Asia Pacific – is built on a simple principle: proven, beam-based sensing technology that is easier to install, more cost-effective, and more reliable than complex camera-based alternatives.



Millions of door cycles every day. Detection has to be right every time.

1974

Airdri Group is founded in Oxford

1983

Formula Systems is established

2026

Formula Systems receives the King's Award for Enterprise: Innovation

RECOGNIZED EXCELLENCE

The King's Award for Enterprise: Innovation



Awarded to Formula Systems in 2026 for the innovation behind Vision Plus.

The King's Award for Enterprise for Innovation is in recognition of the Vision Plus product from Formula Systems. Internationally recognized, it is one of the highest accolades available to UK businesses.

The award reflects the technical innovation behind Vision Plus's beam-based sensing approach and its impact on the elevator industry.

AWARDED FOR

Vision Plus – combined 2D & 3D light curtain



Airdri Group President and CEO Bruce Philipps with His Majesty King Charles III at St James's Palace, London. July 2026.

Formula Systems. Experts in elevator safety technologies.

Part of the Airdri Group. Engineering excellence since 1974.

Awards & accreditations

Formula Systems' Vision Plus product is independently recognized and accredited, giving elevator manufacturers, installers and building owners confidence in its performance, safety and reliability.

01

King's Award for Enterprise: Innovation

One of the highest accolades available to UK businesses, awarded in recognition of the **technical innovation** behind Vision Plus's beam-based sensing approach and its impact on the elevator industry.

02

LiftInstituut accreditation

Vision Plus is accredited by LiftInstituut, the internationally respected notified body for elevator safety testing and certification. Accreditation confirms that Vision Plus meets rigorous, annual, independently verified safety and performance standards recognized across the global elevator industry.

ASME A17.1-2022/B44-22 and A17.1-2025/B44-25

03

Patented technology

Vision Plus is protected by **U.S. Patent No. 12,735,300**. It is recognized as a market leader in elevator door sensor technology, combining award-winning innovation with the reliability that comes from over 50 years of Airdri Group engineering heritage.

Sector-leading products

Vision Plus

COMBINED 2D & 3D LIGHT CURTAIN

PAGE 07

Award-winning, patented door protection. ASME A17.1-2022/B44-22 and A17.1-2025/B44-25 code certified, with 2D and 3D sensing in each edge.

SafeScreen

INFRA-RED LIGHT CURTAIN FOR NORTH AMERICA

PAGE 10

47 diagonal infra-red beams in a compact aluminum housing, backward compatible with any Formula Systems power supply.

SlimScreen

INFRA-RED LIGHT CURTAIN FOR EUROPE AND ASIA PACIFIC

PAGE 12

EN81-20 code compliant, with a multiplexed diagonal array of 72 or 96 beams in a 9mm wide housing.

Together, Vision Plus, SafeScreen and SlimScreen give elevator manufacturers and installers a full range of Formula Systems sensor technologies.

From advanced 2D/3D detection to dependable, purpose-built 2D safety edges for the North American, European and Asia Pacific markets.

Vision Plus

COMBINED 2D & 3D LIGHT CURTAIN

Faster, more cost-effective installation. **No mess, no fuss.** Patented, and award-winning for innovation.

Vision Plus combines 2D and 3D technology in each edge to deliver highly intelligent door safety technology. Each edge transmits and receives signals individually, making detection more precise – significantly reducing the risk of no-detect when passengers approach from different angles, and providing greater reliability when detecting multiple people within the landing area.

The protection zone is specifically designed for minimal protrusion into the landing, helping to eliminate nuisance door reversal.

The total package comprises a 2D/3D receiver, transmitter and Universal Interface Power Supply, and comes as standard with universal mounting options – fewer parts for simpler installation and lower overall cost.

FZU-1442

Designed for standard door sizes

FZU-1342

Suitable for doors with narrower openings

INDEPENDENTLY CERTIFIED



VISION PLUS ACHIEVES
LIFTINSTITUUT CERTIFICATION

CERTIFIED TO ASME A17.1-2022/B44-22 AND A17.1-2025/B44-25



**SCAN FOR FULL
DETAILS**

formula-
systems.com/products/vision-
plus

Features & benefits

FEATURES

- ASME A17.1-2022/B44-22 and A17.1-2025/B44-25 code certified
- Patented technology
- 2D & 3D technology in each edge – no additional detection units required
- Built-in self-monitoring technology
- Universal mounting for center or side door openings
- ECO mode reduces unnecessary power usage by up to 30%
- Connected directly or via Universal Interface Power Supply

BENEFITS

- Quicker installation time
 - Combined 2D & 3D technology in each edge reduces false 3D triggers
 - Intuitive technology significantly improves detection ability
 - Reduces risk of accidents caused by no-detections or mis-detections
 - Protection zone eliminates nuisance door reversal
- Fewer parts, universal mounting and a single power supply mean lower installed cost per elevator.



Technical specifications

Applies to both FZU-1442 (standard door sizes) and FZU-1342 (narrower door openings).

Response time	<100ms
Output	NPN
Indicators (LED)	Red – obstruction
Ingress protection	IP54
Operating voltage	24V DC (18–30)

Current consumption	90mA max RMS (60mA in ECO mode)
Light immunity	>100,000 lux
Temperature	Ambient –20°C to +70°C • Storage –40°C to +80°C
Material	Aluminum alloy casing, plastic lens cover
Approvals & certification	cULus, LiftInstituut, CE, UKCA

FZU-1442

Designed for standard door sizes

FZU-1342

Suitable for doors with narrower openings

SafeScreen

2D INFRA-RED BEAM LIGHT CURTAIN – DESIGNED FOR NORTH AMERICA

Cost-effective, reliable safety edge for elevator doors, with straightforward installation and flexible compatibility.

SafeScreen features 47 diagonal infra-red (IR) beams housed in a compact 30mm wide x 20mm long aluminum housing. The product is backward compatible with any Formula Systems power supply, allowing companies to upgrade older technology with ease, and can be wired directly into suitable door controllers or the Formula Systems Universal Interface.



SCAN FOR FULL DETAILS

formula-systems.com/products/safescreen

FEATURES

- 47 diagonal infra-red beams
- Backward compatible with any Formula Systems power supply
- Can be installed directly, or via a Formula Systems Universal Interface

BENEFITS

- Cost-effective infra-red beam light curtain with proven reliability
- Designed specifically for the North American market
- No-fuss installation with a flexible power connection option



SafeScreen 0547 – Standard

The Standard version of SafeScreen Model 0547 is the core 2D infra-red light curtain for typical elevator door protection, offering detection range up to 1.8m.

Model	0547	Operating voltage	24V DC (18–30)
Version	Standard	Current consumption	100mA (typical)
Dimensions W x D x H	30 x 20 x 2136mm	Ingress protection	IP54
Beam quantity	47	Light immunity	>100,000 lux
Qty Rx / Qty Tx	24 / 24	Temperature	Ambient –20°C to +70°C • Storage –40°C to +80°C
Beam top	1788mm	Material	Aluminum alloy casing, plastic lens cover
Range min / max	0m / 1.8m	Approvals & certification	cULus, CE
Response time	<100ms		
Output	NPN		
Indicators (LED)	Red – obstruction		

A Long Range version – identical housing, dimensions and beam configuration, with range extended to 5.0m – and a track-mounted Model 0524 Freight version are also available. Contact the team for specifications.

SlimScreen

INFRA-RED LIGHT CURTAIN FOR EUROPE AND ASIA PACIFIC

SlimScreen is Formula Systems' EN81-20 code compliant product, available in both static and dynamic applications.

Introduced for Europe, the EN81-20 code specifies that door detection systems must enable communication with the controller when in a fault state, so that relevant action to reduce the energy in the door closure can be taken and an audible alert message delivered.

SlimScreen features a multiplexed diagonal array of 72 or 96 infra-red (IR) beams, packaged in a compact 9mm wide x 26mm long aluminum housing. Formula Systems' standard 35 or 40 infra-red curtain also remains available for the maintenance market.



SCAN FOR FULL DETAILS

formula-systems.com/products/slimscreen

FEATURES

- EN81-20 code compliant
- Standard and Long-Range options
- Can be installed directly or with a Formula Systems Universal Interface

BENEFITS

- Cost-effective infra-red beam light curtain with proven reliability
- Designed specifically for European and Asia Pacific markets
- No-fuss installation with flexible power connection options



Product standard characteristics

Applies across the SlimScreen range in both static and dynamic applications, with Standard and Long-Range beam options.

Response time	<100ms
Output	NPN
Indicators (LED)	Red – obstruction
Ingress protection	IP54
Operating voltage	24V DC (18–30)
Current consumption	100mA (typical)
Light immunity	>100,000 lux
Temperature	Ambient -20°C to +70°C • Storage -40°C to +80°C
Material	Aluminum alloy casing, plastic lens cover
Approvals & certification	cULus, CE

BEAM CONFIGURATION

Multiplexed diagonal array **72 / 96**

Housing (W x D) **9 x 26mm**

Maintenance market **35 / 40 beam**

SlimScreen can be installed directly or with a Formula Systems Universal Interface – see page 14.

Universal Interface

POWER SUPPLY & CONTROLLER INTERFACE

Our interfaces combine with SlimScreen, SafeScreen and Vision products in applications where direct connection is not appropriate.

Housed in a coated steel casing, installation is simple and quick. The product enables the user to select multiple output relays and buzzer/nudging options.

Signal connections to the controller are provided by a pair of relays with changeover contacts. To ensure a failsafe response to power failure, the detection relay – which is normally in the energized mode – will drop out when any of the detection systems are interrupted.

FEATURES

- Combines with SlimScreen, SafeScreen and Vision products where direct connection isn't appropriate
- Coated steel casing for simple, quick installation
- Selectable output relays and buzzer/nudging options
- Failsafe signal connection: detection relay drops out if any detection system is interrupted or on power failure



THREE VERSIONS

FPS-0274

SWITCHABLE

Rated input voltage
115/230VAC (50/60Hz)

FPS-0275

UNIVERSAL AC

Operational voltage
85/265VAC (50/60Hz)

FPS-0280

UNIVERSAL

Operational voltage 20–270VAC
(50/60Hz) or 20–370VDC



SCAN FOR FULL DETAILS

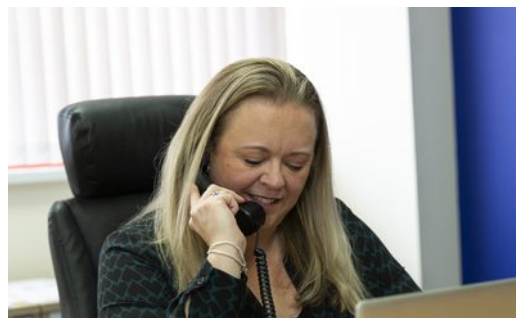
formula-systems.com/universal-interface

Talk to an expert

Inquiries are sent directly to our customer service team in Chicago and Oxford, who will be in touch within 24 hours.

Our friendly sales team is available to discuss your requirements between 8:30am and 5:00pm, Monday to Friday.

Formula Systems can provide a free, no-obligation Vision Plus cost saving comparison for your elevator contract – contact us today to find out more.



YOUR FORMULA SYSTEMS CONTACTS



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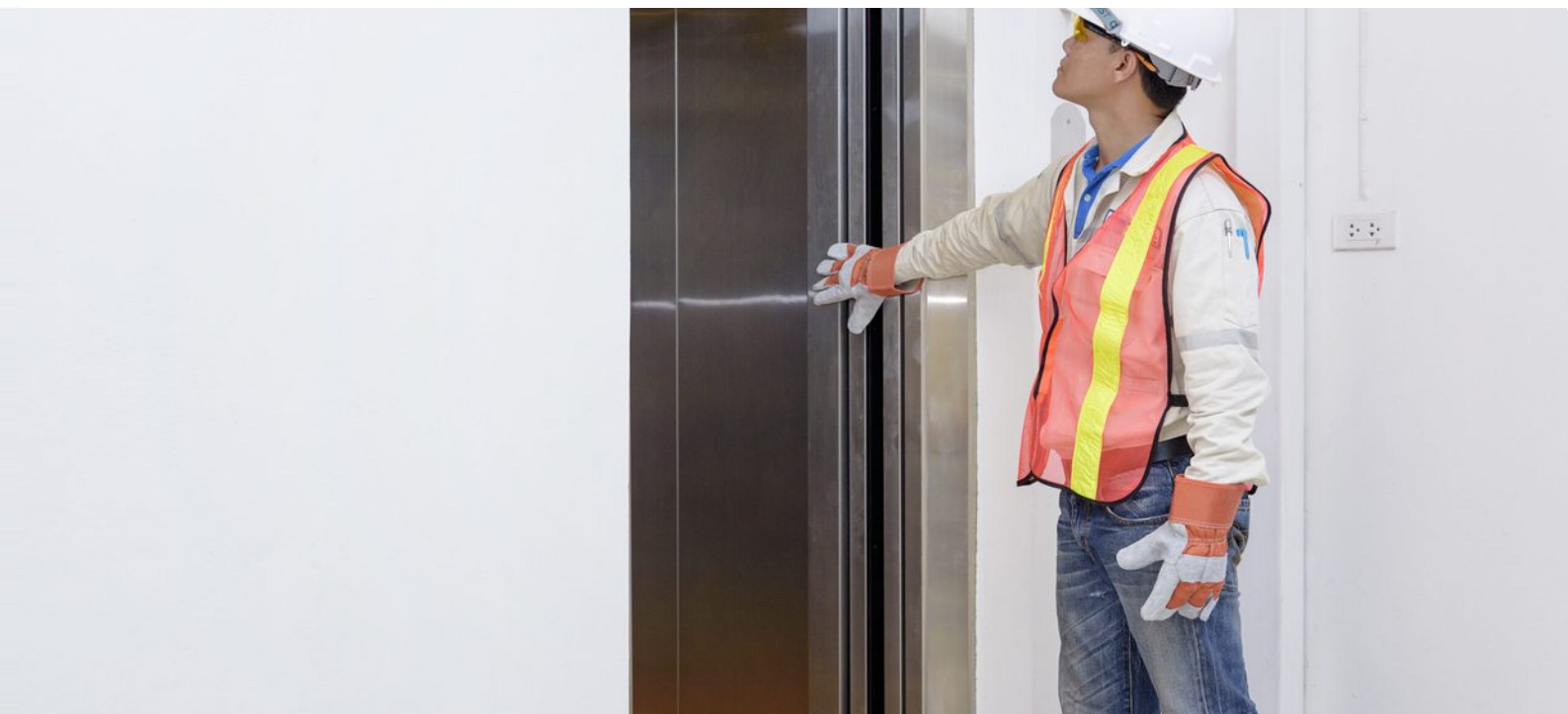


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