

D-LAS Series

► Sensors for Glass Pane Detection

D-LAS-GD1
D-LAS-GD1-30°

D-LAS-24-16x2-AC
D-LAS-34-25x2-AC

D-LAS-44-25x2-AC
D-LAS-44-25x2-AC-CON



Characteristics

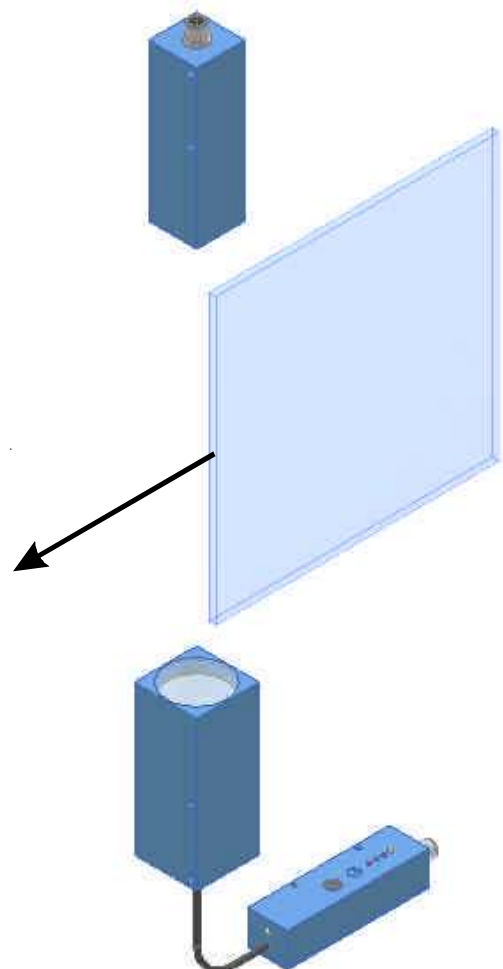
Laser digital light barriers for glass pane detection

The special D-LAS sensors for glass pane detection were developed for reliable detection of thin flat glass due to high switching frequency and a big measuring window.

These sensors can easily be adjusted by means of a potentiometer and 3 LEDs provided at the receiver unit. Sensitivity setting can be realized via 5-step-switch (respectively via Windows® software with type D-LAS-44-25x2-AC-CON).

Advantages:

- Insensitive to outside light (100kHz modulated, optical filter)
- Scratch-resistant glass cover of transmitter- and receiver optics
- Easy adjustment of transmitter and receiver due to visible laser beam
- Switching state indication by means of a super-bright yellow LED
- Enclosure rating IP67
- Analog output as an additional setting aid (not available with type D-LAS-GD1)





Product Overview

Laser digital light barriers for glass pane detection:
Product name

(T=Transmitter R=Receiver)

**D-LAS-GD1-T
D-LAS-GD1-R**
**D-LAS-GD1-T
D-LAS-GD1-30°-R**

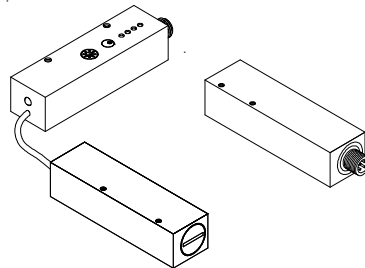

Laser	Semiconductor laser, 670 nm, AC-operation, 1mW max. opt. power, laser class 2 (DIN EN 60825)	
Max. range	typ. 12 m	typ. 4 m
Min. detectable thickness of pane	0.5 mm	0.5 mm
Beam dimensions at transmitter output	typ. 11 mm x 4 mm	typ. 11 mm x 4 mm
Optical filter	Interference filter + absorption filter	Interference filter + absorption filter
Beam divergency	typ. 1 mrad	typ. 1 mrad
Voltage supply	+12VDC ... +32VDC	+12VDC ... +32VDC
Pulsating light operation	100 kHz	100 kHz
Ambient light	up to 5000 Lux	up to 5000 Lux
Sensitivity (switching threshold)	via integrated 5-step-switch	via integrated 5-step-switch
Gain factor (analog signal)	via integrated potentiometer	via integrated potentiometer
Current consumption	Transmitter: 60 mA, receiver: 30 mA	Transmitter: 60 mA, receiver: 30 mA
Switching frequency	typ. 1 kHz	typ. 1 kHz
Switching outputs	Pin 2: Qinv (dirt accumulation) Pin 4: Qinv (glass detection) ---	Pin 2: Analog (0 ... +10V) Pin 4: Qinv Pin 5: Q
Enclosure rating	IP67	IP67
Operating temperature range	-20°C ... +50°C	-20°C ... +50°C
Switching state indication	via super-bright LED (yellow)	via super-bright LED (yellow)
Dirt accumulation indication	---	via LED (yellow)
Signal level indication	via 3 LEDs (red, green, red)	via 3 LEDs (red, green, red)
Housing material	Aluminum, anodized in blue	Aluminum, anodized in blue
Housing dimensions (mm)	Transmitter: approx. 80 x 24 x 16 Receiver: approx. 100 x 28 x 39	Transmitter: approx. 80 x 24 x 16 Receiver: approx. 100 x 28 x 54
Type of connector	Transmitter: 4-pin M12 Receiver: 4-pin M12	Transmitter: 4-pin M12 Receiver: 5-pin M12
Max. switching current	100 mA, short-circuit-proof	100 mA, short-circuit-proof
EMC test acc. to	IEC - 801...	IEC - 801...



Laser digital light barriers for glass pane detection:

Product name

(T=Transmitter R=Receiver)

D-LAS-24-16x2-AC-T**D-LAS-24-16x2-AC-SP-R****D-LAS-34-25x2-AC-T****D-LAS-34-25x2-AC-SP-R**

Laser	Semiconductor laser, 670 nm, AC-operation, 1mW max. opt. power, laser class 2 (DIN EN 60825)	
Max. range	typ. 4 m	typ. 4 m
Min. detectable thickness of pane	0.5 mm	0.5 mm
Beam dimensions at transmitter output	typ. 16 mm x 2 mm	typ. 25 mm x 2 mm
Optical filter	Interference filter, polarisation filter	Interference filter, polarisation filter
Beam divergency	typ. 1 mrad	typ. 1 mrad
Voltage supply	+12VDC ... +32VDC	+12VDC ... +32VDC
Pulsating light operation	100 kHz	100 kHz
Ambient light	up to 5000 Lux	up to 5000 Lux
Sensitivity (switching threshold)	via integrated 5-step-switch	via integrated 5-step-switch
Gain factor (analog signal)	via integrated potentiometer	via integrated potentiometer
Current consumption	Transmitter: 60 mA, receiver: 120 mA	Transmitter: 60 mA, receiver: 120 mA
Switching frequency	typ. 1 kHz	typ. 1 kHz
Switching outputs	Pin 2: Analog (0 ... +10V) Pin 4: Qinv Pin 5: Q	Pin 2: Analog (0 ... +10V) Pin 4: Qinv Pin 5: Q
Enclosure rating	IP67	IP67
Operating temperature range	-20°C ... +50°C	-20°C ... +50°C
Switching state indication	via super-bright LED (yellow)	via super-bright LED (yellow)
Dirt accumulation indication	via LED (yellow)	via LED (yellow)
Signal level detection	via 3 LEDs (red, green, red)	via 3 LEDs (red, green, red)
Housing material	Aluminum, anodized in blue	Aluminum, anodized in blue
Housing dimensions (mm)	Transmitter: approx. 100 x 28 x 24 Receiver: approx. 110.5 x 24 x 28 respectively approx. 100 x 28 x 24	Transmitter: approx. 110 x 34 x 34 Receiver: approx. 110.5 x 24 x 28 respectively approx. 81 x 34 x 34
Type of connector	Transmitter: 4-pin M12 Receiver: 5-pin M12	Transmitter: 4-pin M12 Receiver: 5-pin M12
Max. switching current	100 mA, short-circuit-proof	100 mA, short-circuit-proof
EMC-test acc. to	IEC - 801... C E	IEC - 801... C E



Product Overview

Laser digital light barriers for glass pane detection:

Product name

(T=Transmitter R=Receiver)

D-LAS-34-16x2-AC-T
D-LAS-44-16x2-AC-R
D-LAS-34-25x2-AC-T
D-LAS-44-25x2-AC-CON-R


Laser	Semiconductor laser, 670 nm, AC-operation, 1mW max. opt. power, laser class 2 (DIN EN 0825)	
Max. range	typ. 4 m	typ. 4 m
Min. detectable thickness of pane	0.5 mm	0.5 mm
Beam dimensions at transmitter output	typ. 25 mm x 2 mm	typ. 25 mm x 2 mm
Optical filter	Red light filter RG630	Red light filter RG630
Beam divergency	typ. 1 mrad	typ. 1 mrad
Voltage supply	+12VDC ... +32VDC	+12VDC ... +32VDC
Pulsating light operation	100 kHz	100 kHz
Ambient light	up to 5000 Lux	up to 5000 Lux
Sensitivity (switching threshold)	via integrated 5-step-switch	adjustable under Windows® via PC
Gain factor (analog signal)	via integrated potentiometer	via integrated potentiometer
Current consumption	Transmitter: 60 mA, receiver: 120 mA	Transmitter: 60 mA, receiver: 60 mA
Switching frequency	typ. 1 kHz	typ. 1 kHz
Switching outputs	Pin 2: Analog (0 ... +10V) Pin 4: Qinv Pin 5: Q	Pin 2: Analog (0 ... +10V) Pin 4: Qinv or Q (adjustable under Windows® via PC) ---
Enclosure rating	IP67	IP67
Operating temperature range	-20°C ... +50°C	-20°C ... +50°C
Switching state indication	via super-bright LED (yellow)	via super-bright LED (yellow)
Dirt accumulation indication	via LED (yellow)	---
Signal level indication	via 3 LEDs (red, green, red)	---
Dynamic range indication	---	via red LED
Teach function	---	via integrated key button (respectively via digital input)
Housing material	Aluminum, anodized in blue	Aluminum, anodized in blue
Housing dimensions (mm)	Transmitter: approx. 110 x 34 x 34 Receiver: approx. 110.5 x 24 x 28 respectively approx. 105 x 44 x 44	Transmitter: approx. 110 x 34 x 34 Receiver: approx. 110.5 x 24 x 28 respectively approx. 81 x 34 x 34
Type of connector	Transmitter: 4-pin M12 Receiver: 5-pin M12	Transmitter: 4-pin M12 Receiver: 5-pin M12, 5-pin fem. conn. Binder 712 (RS-232)
Max. switching current	100 mA, short-circuit-proof	100 mA, short-circuit-proof
EMC-test acc. to	IEC - 801... $\text{C} \text{ E}$	IEC - 801... $\text{C} \text{ E}$