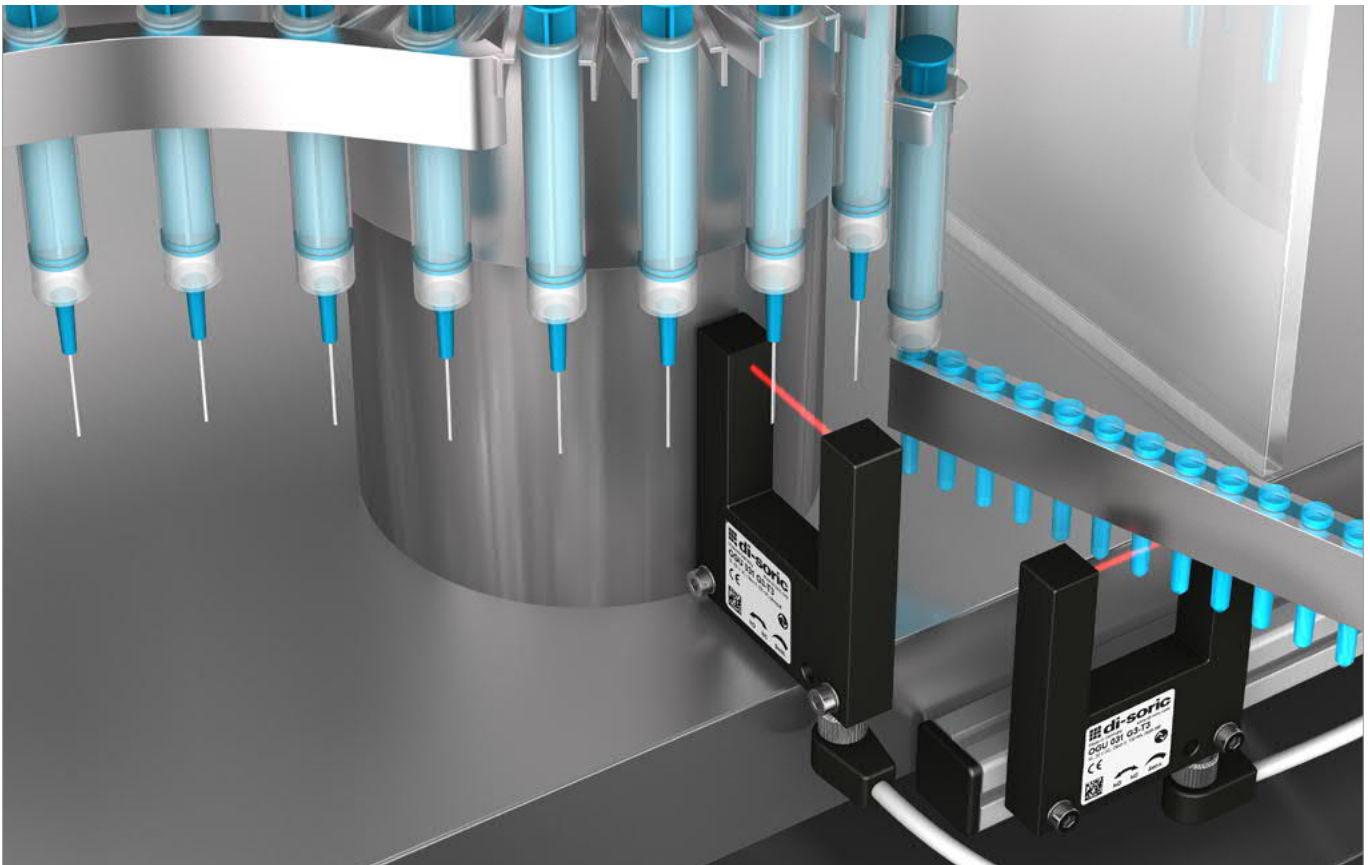


Fork light barriers



di-soric fork light barriers operate based on the operating principle of through-beam sensors. They are delivered ready to install and do not have to be adjusted afterward. Fork light barriers are used wherever small objects or object positions, regardless of what type of surface they have, must be detected quickly and precisely.



 **di-soric**

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OGU


The OGU series with an LED light source is the standard among fork light barriers. The largest range of fork light barriers on the market includes devices with fork openings from 5 mm to 250 mm. OGU fork light barriers offer high resolution and reproducibility with formidable speed. They are operated intuitively using potentiometers, auto-teach or IO-Link. Four preset operation modes provide the option for ideal adaptation to the application. At the same time, IO-Link offers important advantages in configuration and diagnosis.


Technical data (typ.) +20 °C, 24 VDC	
Service voltage	10 to 30 V DC
No-load current	40 mA
Switching output	Push-pull (pnp/npn can be adjusted by IO-Link) 100 mA, NO/NC (can be switched by potentiometer)
Sensitivity adjustment	Adjustable (potentiometer)
Ambient temperature	-25 to 60 °C
Degree of protection	IP 67
Operation modes	Standard (general applications) High Resolution (for detecting very small objects) Power (increased function reserve) Speed (reliable detection of fast-moving parts)
Plug connector	M8, 3-pin
Connection cable	TK... (optionally available)



Operation modes

 <p>Standard – General applications</p> <ul style="list-style-type: none"> 5 kHz Reproducibility: 0.02 mm 	 <p>Power – Increased function reserve</p> <ul style="list-style-type: none"> Increased transmitting power,
 <p>High Resolution – For detecting very small objects</p> <ul style="list-style-type: none"> Resolution improved by 30% 	 <p>Speed – Reliable detection of fast-moving parts</p> <ul style="list-style-type: none"> 30% higher switching frequency

	Fork width (mm)	Housing design Size (mm)	Red light, 660 nm, clocked	Infrared light, 880 nm	Resolution, smallest detectable part (mm)	Standard factory settings	Adjustable switching frequency (Hz)	IO-Link interface	Reproducibility (mm)	Die-cast zinc, powder-coated	Aluminum, black varnished/anodized	Product description	
	05	25 x 45 x 10	■	■	Ø 0.2 (min. Ø 0.1)	■	10,000 (max. 14,000)	■	0,02	■		OGU 005 G3-T3	
	10	25 x 45 x 10		■	Ø 0.3 (min. Ø 0.2)	■	10,000 (max. 14,000)	■	0,02	■		OGU 010 G3-T3	
	20	40 x 50 x 10	■	■	Ø 0.3 (min. Ø 0.2)	■	5,000 (max. 8,000)	■	0,02	■		OGU 020 G3-T3 OGU 021 G3-T3	
	30	50 x 60 x 10	■	■	Ø 0.3 (min. Ø 0.2)	■	5,000 (max. 8,000)	■	0,02	■		OGU 030 G3-T3 OGU 031 G3-T3	
	40	60 x 70 x 10	■		Ø 0.3 (min. Ø 0.2)	■	5,000 (max. 8,000)	■	0,02	■			OGU 041 G3-T3
	50	70 x 80 x 10	■	■	Ø 0.3 (min. Ø 0.2)	■	5,000 (max. 8,000)	■	0,02	■			OGU 050 G3-T3 OGU 051 G3-T3
	60	80 x 80 x 10	■		Ø 0.3 (min. Ø 0.2)	■	5,000 (max. 8,000)	■	0,02		■		OGU 061 G3-T3

	Fork width (mm)	Housing design Size (mm)	Red light, 660 nm, clocked	Infrared light, 880 nm	Resolution, smallest detectable part (mm)	Standard factory settings	Adjustable switching frequency (Hz)	IO-Link Interface	Reproducibility (mm)	Die-cast zinc, powder-coated	Aluminum, black varnished/anodized	Product description	
	70	90 x 80 x 10	■		Ø0,3 (min. Ø0,2)	■	5,000 (max. 8,000)	■	0,02		■	OGU 071 G3-T3	
	80	100 x 80 x 10	■	■	Ø0,3 (min. Ø0,2)	■	5,000 (max. 8,000)	■	0,02	■		OGU 080 G3-T3	
												OGU 081 G3-T3	
	90	110 x 80 x 10	■		Ø0,3 (min. Ø0,2)	■	5,000 (max. 8,000)	■	0,02		■	OGU 91 G3-T3	
	100	120 x 80 x 10	■		Ø0,3 (min. Ø0,2)	■	5,000 (max. 8,000)	■	0,02	■		OGU 101 G3-T3	
	120	144 x 155 x 12		■	Ø0,5 (min. Ø0,3)	■	5,000 (max. 8,000)	■	0,02	■			OGU 120 G3-T3
			■									OGU 121 G3-T3	
	170	194 x 140 x 12	■		Ø0,5 (min. Ø0,4)	■	5,000 (max. 8,000)	■	0,03	■			OGU 171 G3-T3
220	244 x 140 x 12	■		Ø1,0 (min. Ø0,8)	■	5,000 (max. 6,500)	■	0,03	■			OGU 221 G3-T3	
250	274 x 140 x 12	■		Ø1,0 (min. Ø0,8)	■	5,000 (max. 6,500)	■	0,03		■		OGU 251 G3-T3	





OGUP DIRT-RESISTANT


These high-performance fork light barriers have an increased functional reserve, which means that cleaning cycles are reduced to a minimum. They are operated intuitively using potentiometers or IO-Link. Four preset operating modes make ideal adaptation to the application possible, while IO-Link offers important advantages in configuration and diagnosis.

Technical data (typ.)	+20 °C, 24 VDC
Service voltage	10 to 30 VDC (Supply class 2)
Switching output	Push-pull (pnp/npn can be adjusted by IO-Link) 100 mA, NO/NC (can be switched by potentiometer)
Sensitivity adjustment	Adjustable (potentiometer)
Ambient temperature	-25 to 60 °C
Degree of protection	IP 67
Operation modes	Power (increased function reserve) Factory settings Standard (general applications) High Resolution (for detecting very small objects) Speed (reliable detection of fast-moving parts)
Plug connector	M8, 3-pin
Connection cable	TK... (optionally available)



Operation modes

- | | |
|---|--|
|  <p>Standard – General applications</p> <ul style="list-style-type: none"> 5 kHz Reproducibility: 0.02 mm |  <p>Power – Increased function reserve</p> <ul style="list-style-type: none"> Increased transmitting power, |
|  <p>High Resolution – For detecting very small objects</p> <ul style="list-style-type: none"> Resolution improved by 30% |  <p>Speed – Reliable detection of fast-moving parts</p> <ul style="list-style-type: none"> 30% higher switching frequency |

	Fork width (mm)	Housing design Size (mm)	Infrared light, 860 nm	No-load current (mA)	Resolution, smallest detectable part (mm)	Power factory settings	Switching frequency (Hz)	Reproducibility (mm)	Die-cast zinc, black, powder-coated	Product description
OGUP Dirt-resistant										
	20	40 x 50 x 10						0.03		OGUP 020 G3-T3
	30	50 x 60 x 10	■	30	Ø 2.0 (min. Ø 0,2)	■	200 (max 8,000)	0.03	■	OGUP 030 G3-T3
	50	70 x 80 x 10						0.03		OGUP 050 G3-T3
	80	100 x 80 x 10						0.03		OGUP 080 G3-T3





OGUL LASER


The OGUL series is particularly suited for detecting small parts down to 0.05 mm. Using collimated laser red light achieves a high degree of precision of the switching point between transmitter and receiver across the entire fork width. The devices work with a clocked red light laser in the eye-safe laser class 1. The easily visible, small laser point makes quick adjustment to the object possible even with a large amount of ambient light.



Technical data (typ.) +20 °C, 24 VDC	
Emitted light	Red-light laser, 655 nm, clocked
Service voltage	10 to 30 VDC (Supply class 2)
Switching output	Push-pull (pnp/npn can be adjusted by IO-Link) 100 mA, NO/NC (can be switched by potentiometer)
Sensitivity adjustment	Adjustable (potentiometer)
Ambient temperature	-25 to 60 °C
Degree of protection	IP 67
Operation modes	Standard (general applications) High Resolution (for detecting very small objects) Power (increased function reserve) Speed (reliable detection of fast-moving parts)
Plug connector	M8, 3-pin
Connection cable	TK... (optionally available)

Operation modes

 <p>Standard – General applications</p> <ul style="list-style-type: none"> 5 kHz Reproducibility: 0.01 mm 	 <p>Power – Increased function reserve</p> <ul style="list-style-type: none"> Increased transmitting power,
 <p>High Resolution – For detecting very small objects</p> <ul style="list-style-type: none"> Resolution improved by 30% 	 <p>Speed – Reliable detection of fast-moving parts</p> <ul style="list-style-type: none"> 100% higher switching frequency

	Fork width (mm)	Housing design Size (mm)	Transmission light (clocked)	No-load current (mA)	Resolution, smallest detectable part (mm)	Standard factory settings	Switching frequency (Hz)	Reproducibility (mm)	Die-cast zinc, black, powder-coated	Stainless steel V4A (1.4571 / 1.4571)	Product description
OGUL Laser											
	30	50 x 60 x 10	Laser, red	< 30	Ø 0.05 (min. Ø 0,03)	■	5000 (max 10,000)	0.001	■		OGUL 031 G3-T3
	50	70 x 80 x 10			Ø 0.05 (min. Ø 0,03)						OGUL 051 G3-T3
	80	100 x 80 x 10			Ø 0.05 (min. Ø 0,04)						OGUL 081 G3-T3
	120	144 x 90 x 12			Ø 0.10 (min. Ø 0,05)						OGUL 121 G3-T3
	30	50 x 60 x 10	Laser, red	< 30	Ø 0.05 (min. Ø 0,03)	■	5000 (max 10,000)	0.001	■		OGUL 031 G3-T3/V4A
	50	70 x 80 x 10			Ø 0.05 (min. Ø 0,03)						OGUL 051 G3-T3/V4A
	80	100 x 80 x 10			Ø 0.05 (min. Ø 0,04)						OGUL 081 G3-T3/V4A
	120	144 x 90 x 12			Ø 0.10 (min. Ø 0,05)						OGUL 121 G3-T3/V4a

OGU STAINLESS STEEL

The OGU fork light barriers with V4A stainless steel housing are mechanically and electrically compatible with standard fork light barriers. These devices are used particularly in the pharmaceuticals, beverage and food industries, because they satisfy the particular requirements for easy and reliable cleaning using aggressive media.



Technical data (typ.)	+20 °C, 24 VDC
Service voltage	10 to 30 VDC (Supply class 2)
Switching output	Push-pull (pnp/npn can be adjusted by IO-Link) 100 mA, NO/NC (can be switched by potentiometer)
Sensitivity adjustment	Adjustable (potentiometer)
Ambient temperature	-25 to 60 °C
Degree of protection	IP 67
Operation modes	Standard (general applications) High Resolution (for detecting very small objects) Power (increased function reserve) Speed (reliable detection of fast-moving parts)
Plug connector	M8, 3-pin
Connection cable	TK... (optionally available)

Operation modes



Standard – General applications

- 5 kHz OGU 03x – 12x
- Reproducibility: 0.02 mm



Power – Increased function reserve

- Increased transmitting power,



High Resolution – For detecting very small objects

- Resolution improved by 30%



Speed – Reliable detection of fast-moving parts

- 30% higher switching frequency


	Fork width (mm)	Housing design Size (mm)	Red light, 660 nm, clocked	No-load current (mA)	Resolution, smallest detectable part (mm)	Standard factory settings	Switching frequency (Hz)	Reproducibility (mm)	Stainless steel V4A (1.4404 / 1.4571)	Product description
	10	25 x 45 x 10	■	30	Ø0.2 (min. Ø0.1)	■	5,000 (10,000)	0.02	■	OGU 010 G3-T3/V4A
	30	50 x 60 x 10	■	30	Ø0.3 (min. Ø0.2)	■	5,000 (10,000)	0.02	■	OGU 031 G3-T3/V4A
	50	70 x 80 x 10	■	30	Ø0.3 (min. Ø0.2)	■	5,000 (10,000)	0.02	■	OGU 051 G3-T3/V4A
	80	100 x 80 x 10	■	30	Ø0.3 (min. Ø0.2)	■	5,000 (10,000)	0.02	■	OGU 081 G3-T3/V4A
	120	144 x 90 x 12	■	45	Ø0.5 (min. Ø0.2)	■	5,000 (10,000)	0.02	■	OGU 121 G3-T3/V4A

LLGT MEASURING

The LLGT line laser fork light barrier with analog output is used for precise edge measurement and for determining diameters. This measuring, high-resolution fork light barrier can be used to reliably capture and analyze even the smallest differences in dimensions.

Technical data (typ.)	+20 °C, 24 VDC
Service voltage	18 to 30 V DC
Resolution	> 20 µm (analog output)
Measuring range	25 mm
Switching output	Push-pull, 150 mA (2x)
Switching hysteresis	0.1 mm
Analog output	4 to 20 mA / 0 to 10V switchable
Analog output linearity	± 0.3%
Admissible impedance	≤ 500 ohm / ≥ 1 kohm
Frequency of measuring sequence	200 Hz
Characteristics	Trigger input
Display	LED green (operation) LED yellow (switching outputs)
Ambient temperature	+5 to 45 °C
Ambient light immunity	5 kLx
Insulation voltage endurance	500 V
Protection type	IP 67
Protection optics	PMMA
Plug connector	M12 connector, 8-pin



	Fork width (mm)	Housing design Size (mm)	Red-light laser line, 650 nm	Laser class (EN60825-1)	No-load current (mA/24 V DC)	Resolution, smallest detectable part (mm)	Switching frequency (Hz)	Aluminum, black anodized	Product description
LLGT Measuring									
	80	150 x 90 x 18	■	1	70	Ø0.5		■	LLGT 081 M 25 IUG8-B8

Accessories for LLGT 081	
	see "Connection technology," page 198

OGUZ SPECIAL DESIGNS

Fork light barriers in specific designs complete the extensive range that di-soric offers. Differential fork light barriers detect even minimal remission differences (diffuse reflection) for the detection of films that are very thin and as clear as glass. Fork light barriers for flow monitoring provide a continuous switching signal in case of the flow of a preset minimum quantity.

Technical data (typ.)	+20 °C, 24 VDC
Service voltage	10 to 35 V DC
Switching output	pnp, 200 mA, NO/NC switchable
Sensitivity adjustment	4-turn potentiometer
Ambient temperature	-10 to 60 °C
Protection type	IP 67
Plug connector	M8, 3-pin
Connection cable	TK... (optionally available)



	Fork width (mm)	Housing design Size (mm)	Infrared light, 880 nm	No-load current (mA)	Resolution, smallest detectable part (mm)	Switching frequency (Hz)	Reproducibility (mm)	Aluminum, black anodized	Product description
Differential fork light barriers									
	30	50 x 70 x 10	■	35	Ø0.07	5,000	0.01	■	ODG 30 P3K-TSSL
	50	70 x 90 x 10			Ø0.1				ODG 50 P3K-TSSL
	90	110 x 115 x 10			Ø0.25				ODG 90 P3K-TSSL

OG-Z ACCESSORIES FOR FORK LIGHT BARRIERS

These air blast devices are used to purge dirt and deposits from the front panel. Assembly is done on the assembly bore of the angled / fork light barrier.

Air nozzles (FBE)		
Flexible	Length 60 mm	FBE 60
Flexible	Length 110 mm	FBE 110