

FÖGE

Industrial Equipments



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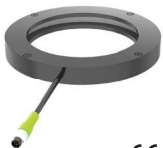
info@fogegmbh.com



FÖGE ELEKTRONIK GMBH
Böhleswasenweg 11
72555 Metzingen



+49 7123 9570508



CE

Instruction Manual

Product: VL-DFF Series

Low Angle Light

1. Intended Use

VL-DFF Series Low Angle Light is designed for use in industrial areas. Purpose of the product is inspection of parts, positioning for large parts. Light is positioned as close as possible to the part.

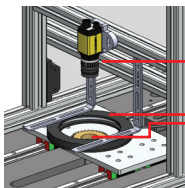
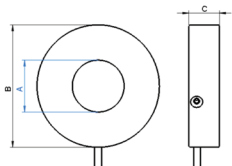
The system must be operated within the limits specified in technical data and used according to technical specifications as well as installation instructions. The system must be used in such a way that no person are in danger or machines and other material goods are damaged in the event of malfunction or total failure of the system. Take additional precautions for safety and damage prevention in case of safety related applications.

2. Technical Information

Model	Colour	Wavelength/ Color Temperature	Power Supply	Power Consumption	Connection	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
VL-DFF-30-70-R-24-C30	R	660nm	24VDC	continous: 2W, trigger: 4W	M8 4 pin w 300mm cable	30	70	17.5	*	*
VL-DFF-30-70-W-24-C30	W	6500K	24VDC	continous: 2.5W, trigger: 5W	M8 4 pin w 300mm cable	30	70	17.5	*	*
VL-DFF-103-143-R-24-C30	R	660nm	24VDC	continous: 4W, trigger: 8W	M8 4 pin w 300mm cable	103	143	16.5	*	*
VL-DFF-103-143-W-24-C30	W	6500K	24VDC	continous: 5W, trigger: 9W	M8 4 pin w 300mm cable	103	143	16.5	*	*
VL-DFF-365-400-R-24-C30	R	660nm	24VDC	continous: 16W, trigger: 29W	M8 4 pin w 300mm cable	365	400	16.5	*	*
VL-DFF-365-400-W-24-C30	W	6500K	24VDC	continous: 16W, trigger: 29W	M8 4 pin w 300mm cable	365	400	16.5	*	*

3. Dimensions / Installation

System operation assumes knowledge of the assembly instructions. The symbols used for safety is shown in section 8(Safety) of manual.



Camera

VL-DFF

Part

Accessories

	Suitable Product	Ordering Code	Accessories Image
1	VL-DFF-30-70-R-24-C30	VL-DFF-BR-01	
2	VL-DFF-30-70-W-24-C30		
3	VL-DFF-103-143-R-24-C30	VL-DFF-BR-02	
4	VL-DFF-103-143-W-24-C30		
5	VL-DFF-365-400-R-24-C30	VL-DFF-BR-03	
6	VL-DFF-365-400-W-24-C30		



Detecting edges, edge defect detection, positioning of low contrast parts



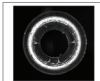
Groove, scratch detection, diameter measurement based on edges



Ball bearing inspection, round object check



Positioning based on edges, low color contrast part identification



Part edge crack, dent inspection



Part detection on PCB's, positioning, detecting parts based on height difference

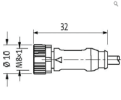
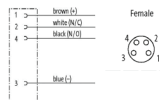
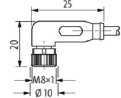
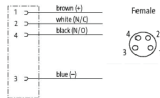


Part positioning related to the edges, part identification



Part positioning, detection on parts which has same color with background

4. Electrical Connection











	Cable	Ordering Code	Drawing/Connection
1	M8 female 0° with cable PVC 4x0.25 bk UL/CSA 3m	7000-08061-6110300	 
2	M8 female 0° with cable PVC 4x0.25 bk UL/CSA 5m	7000-08061-6110500	
3	M8 female 90° with cable PVC 4x0.25 bk UL/CSA 3m	7000-08101-6110300	 
4	M8 female 90° with cable PVC 4x0.25 bk UL/CSA 5m	7000-08101-6110500	

5. Display/Controls

Illumination intensity modes with dip switches





With dip switches located on the product, you can increase the light intensity when it is needed.

Light ON Position Percentage	Light Intensity	Accessories Image
 ON : % 100 OFF : % 0 (Standard High Intensity)		Can be used without strobe, continuous illumination mode
 ON : % 85 OFF : % 15		Due to high illumination settings, use this mode only with strobe input with given ON/OFF percentage.
 ON : % 72 OFF : % 28		Due to high illumination settings, use this mode only with strobe input with given ON/OFF percentage.
 ON : % 60 OFF : % 40		Due to high illumination settings, use this mode only with strobe input with given ON/OFF percentage.
 ON : % 50 OFF : % 50 (Ultra high light Intensity)		Due to high illumination settings, use this mode only with strobe input with given ON/OFF percentage.

Use high intensity modes only with trigger and strobe type lighting. Do not use product continuous mode with high intensity.



6. Faults

In any case do not open the product.  

If the leds not on check the connection and power supply.



If still leds are not on contact FÖGE or distributor.

7. Warnings

- Connect the power supply and the display/output device according to the safety regulations for electrical equipment.
- The supply voltage must not exceed the specified limits.
- Avoid shocks and impacts to the sensor.
- Protect the cable against damage.

Possible Results of Avoidance

Risk of injury by electric shock 

Damage to or destruction of the sensor  

8. Safety

System operation assumes knowledge of the assembly instructions. The following symbols are used in these assembly instructions:



Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.



Indicates a situation that may result in property damage if not avoided.



Indicates an electrical shock if not avoided or properly follow comments.

9. Liability for Material Defects

All components of the device have been checked and tested for functionality at the production facility. However, if defects occur despite our careful quality control, FÖGE or your dealer must be notified immediately.

The liability for material defects is 12 months from delivery.

Within this period, defective parts, except for wearing parts, will be repaired or replaced free of charge, if the device is returned to FÖGE with shipping costs prepaid. Any damage that is caused by improper handling, the use of force or by repairs or modifications by third parties is not covered by the liability for material defects. Repairs are carried out exclusively by FÖGE.

Further claims can not be made. Claims arising from the purchase contract remain unaffected. In particular, FÖGE shall not be liable for any consequential, special, indirect or incidental damage. In the interest of further development, FÖGE reserves the right to make design changes without notification.

10. Decommissioning, Disposal

Remove the power supply and output cable on the sensor.

Incorrect disposal may cause harm to the environment.

Dispose of the device, its components and accessories, as well as the packaging materials in compliance with the applicable country-specific waste treatment and disposal regulations of the region of use.