



Industrial Equipments



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Instruction Manual

Product: VL-COX Series Coaxial
Light

1. Intended Use

VL-COX Series Coaxial Light is designed for use in industrial areas. Purpose of the product is inspection of parts, positioning, code reading, quality inspection. This type of lighting allows to illuminate parts on axis and close to parallel. Light is positioned above the part.

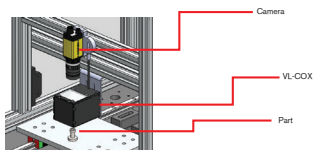
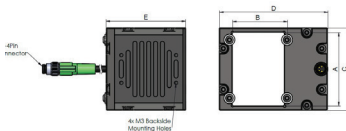
The system must be operated within the limits specified in technical data and used according to technical specifications as well as installation instructions. The system must be used in such a way that no person are in danger or machines and other material goods are damaged in the event of malfunction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

2. Technical Information

Model	Color	Wavelength/ Color Temperature	Power Supply	Power Consumption	IP Rating (Option: IP67)	Connection	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	Housing Material	Light Angle (°)
VL-COX-32-16-R-24-C30	R	625nm	24VDC	1W	IP50	M8 4 pin w 300mm cable	32	16	41.5	60	39	Aluminum (Black, Anodized)	120°
VL-COX-32-16-W-24-C30	W	6500K	24VDC	1.25W	IP50	M8 4 pin w 300mm cable	32	16	41.5	60	39	Aluminum (Black, Anodized)	120°
VL-COX-50-35-R-24-C30	R	625nm	24VDC	2W	IP50	M8 4 pin w 300mm cable	50	35	59.5	79	58	Aluminum (Black, Anodized)	120°
VL-COX-50-35-W-24-C30	W	6500K	24VDC	2.6W	IP50	M8 4 pin w 300mm cable	50	35	59.5	79	58	Aluminum (Black, Anodized)	120°
VL-COX-84-78-R-24-C30	R	625nm	24VDC	9W	IP50	M8 4 pin w 300mm cable	94	78	103.5	122	101	Aluminum (Black, Anodized)	120°
VL-COX-84-78-W-24-C30	W	6500K	24VDC	11.25W	IP50	M8 4 pin w 300mm cable	94	78	103.5	122	101	Aluminum (Black, Anodized)	120°
VL-COX-148-133-R-24-C30	R	625nm	24VDC	18W	IP50	M8 4 pin w 300mm cable	148	133	157.5	177	156	Aluminum (Black, Anodized)	120°
VL-COX-148-133-W-24-C30	W	6500K	24VDC	23.5W	IP50	M8 4 pin w 300mm cable	148	133	157.5	177	156	Aluminum (Black, Anodized)	120°

3. Dimensions / Installation

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



Sample Applications



Crack, defect detection on flat metal surfaces



Position detection, surface inspection



Pin position check, part inspection inside holes



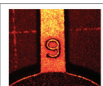
Even, on axis, diffuse light for small objects



Checking parts with height difference inside parts



Round part defect detection by rotating with linescan cameras



OCR character check on small metal parts



Edge defect detection, chamfer defect check on small metal parts

4. Electrical Connection

Cable	Ordering Code	Drawing/Connection	
M8 female 0" with cable PVC 4x0.25 bk UL/CSA 2.5m	TKPM-Z-2.5/4		
M8 female 0" with cable PVC 4x0.25 bk UL/CSA 4m	TKPM-Z-5/4		
M8 female 90° with cable PVC 4x0.25 bk UL/CSA 2.5m	TKPM-W-2.5/4		
M8 female 90° with cable PVC 4x0.25 bk UL/CSA 4m	TKPM-W-5/4		

For proper light function, supply either a PNP or NPN signal, not both.
Failure to supply light with correct input current will result in inconsistent lighting behavior.
(see Product Specifications for requirements)

Pins	Function	Wire Color
1	Power In +24VDC	BROWN
2	NPN	WHITE
3	GND	BLUE
4	PNP	BLACK

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
		Can be used without strobe, continuous illumination mode
		Due to high illumination settings, use this mode only with strobe input with given ON/OFF percentage.
		Due to high illumination settings, use this mode only with strobe input with given ON/OFF percentage.
		Due to high illumination settings, use this mode only with strobe input with given ON/OFF percentage.
		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 are 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.