

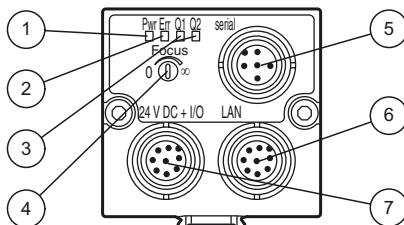


Function

The VOS312 is a versatile vision sensor suitable for detection tasks such as presence, completeness and position checks. These tasks can be performed using 5 evaluation methods. The sensor can be configured via the intuitive VOS3 Config PC interface and then operated without a PC.

Furthermore, the VOS312 can store up to 16 jobs on the sensor, which can then managed or selected during operation in the job management tool or telegram control. The sensor also offers the option of linking up to 6 characteristic tests.

Indicating / Operating means



1	Operating LED	green
2	Error LED	red
3	Signal LED	yellow
4	Focus adjustable	
5	Serial	
6	Ethernet	
7	Power supply + I/O	

Model Number

VOS312-100

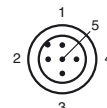
Vision sensor for complex object recognition with 6 feature checks and 16 job storage memory locations

Features

- Five selectable evaluation methods
- With up to 6 feature checks
- Offline parameterization
- 16 Jobs on-board can be saved
- Job administration
- Integrated illumination
- External focus setting

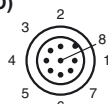
Electrical connection

Pinning according 5-pin M12-connector (serial)



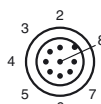
Pin	Signal	Color
1	RxD+	white
2	RxD-	brown
3	TxD+	green
4	TxD-	yellow
5	GND	grey

Pinning according 8-pin M12-connector (24 V DC + I/O)



Pin	Signal	Color	
1	IN1	white	(TRIGGER)
2	+24 V DC	brown	
3	OUT3	green	(RESULT)
4	OUT2	yellow	(READY)
5	IN2	grey	
6	OUT1	pink	(EXT_ILL)
7	GND	blue	
8	OUT4	red	(POSITION)

Pinning according 8-pin M12-connector (LAN)



Pin	Signal
1	
2	
3	
4	TxD-
5	RxD+
6	TxD+
7	
8	RxD-

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Technical data**General specifications**

Object distance	20 ... 500 mm , Nominal 100 mm
Light source	Integrated LED lightning or External lighting
Light type	White light
Approvals	CE, cULus
Picture detail	8 mm x 6 mm ... 135 mm x 100 mm , dependant of operating distance 30 mm x 22 mm At 100 mm operating distance
Trigger mode	Free-running or triggered externally
Depth of focus	± 5 % of the operating distance
Resolution	640 x 480 pixels
Capture range	adjustable

Parameterization/software

Parameter assignment	Parameterization via PC user interface VOS3-Config
Evaluations per picture	
Position detection	Can be activated/deactivated
Feature detection	1 ... 6
Location tracing	Location tracing with result from position detection
Evaluation procedure	
Position detection	Focal point Touch Pattern Correlation
Feature check	Grey scale value Gradient Contrast Pattern Contour

Indicators/operating means

Operating display	LED green
Function display	LED red: fault signal , LED yellow: switching state (2x) : Position OK/features OK
Focus setting	Focus adjustable via set screw

Electrical specifications

Operating voltage	U _B	24 V DC ± 20 %
Ripple		5 V _{pp}
Operating current		200 mA without load
Protection class		2

Interface

Interface type	Ethernet 100 MBit/s , RS 422
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Input

Input voltage	24 V
Control input	External triggering
switching threshold	high: ≥ 10 V, low: ≤ 3 V , trigger on the ascending edge

Output

Switching type	NO pnp optically decoupled , short-circuit/overload protected
Switching voltage	24 V
Switching current	max. 200 mA each output
Pulse extension	adjustable

Output 1

Output type	Connection to external lighting
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Output 2

Output type	Ready for operation
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Output 3

Output type	All features within tolerance
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Output 4

Output type	Position detected/within tolerance
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Ambient conditions

Ambient temperature	0 ... 50 °C (273 ... 323 K)
Storage temperature	-20 ... 60 °C (253 ... 333 K)
Shock resistance	< 50 g

Mechanical specifications

Protection degree	IP67
Connection	M12 connector, 5 pin ; 2 x M12 connector, 8-pin
Material	
Housing	anodised aluminium , plastic
Optical face	Plastic pane
Installation	with Fixation clamp for sensors with dove tail
Mass	approx. 170 g

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2
Standard conformity	

Accessories**OMH-VOS300-K01**

Mounting aid

VOL300-FL45-RT

External lighting

OMH-VOS300-01

Mounting aid

VOL300-FL45-WH

External lighting

V19-G-3M-PUR ABG-V45X-G

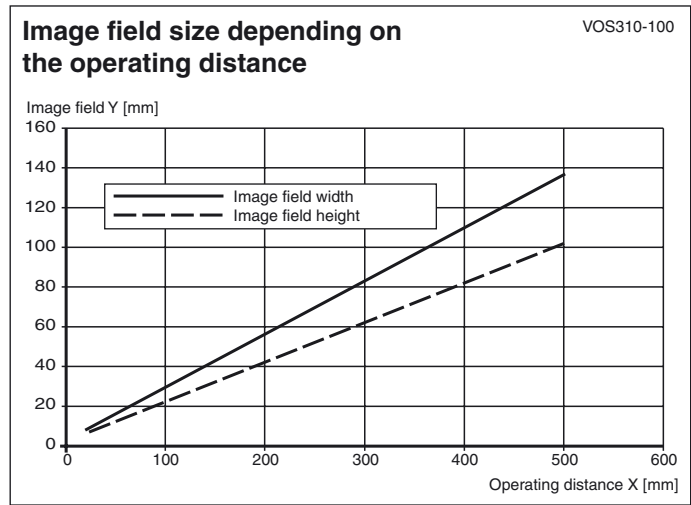
Connection cable

V19-G-3M-PUR ABG-V45-G

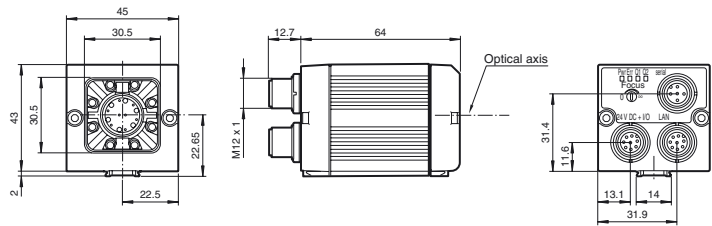
Connection cable

Electromagnetic compatibility	EN 61000-4-2/3/4/6
Mech. capacity	EN 60068-2-6 , EN 60068-2-27
Shock and impact resistance	EN 60947-5-2

Curves / Diagrams



Dimensions



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