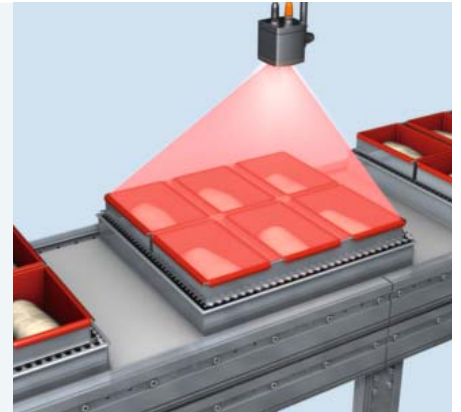




Industrial imaging

# 3D volume control for segmented containers



3D sensors



**Reduced waste and downtime**

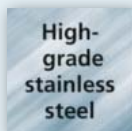
**Independent of soiling, colour  
and coating**

**Intuitive teaching and selection  
of different shapes, sets and  
formats**

**Easy step-by-step parameter  
setting**

**Empty state and overflow can  
be detected separately**

**Quality control independent  
of extraneous light**



## Advantages of 3D volume control

The system is used to check the homogeneous filling of containers with viscous media, such as dough or pastes. An example is the detection of double dough. Automated bread production is prone to errors during the simultaneous filling of several baking tins (tin sets). Tins that remain unfilled compromise efficiency. Overfilled tins on the other hand lead to reduced quality and increased soiling of the installation and may even elevate the risk of fire.

## Versatile use

The application is an optimum choice for many different manufacturing processes. It can be used in food processing (production of bread, cheese, pasta and meat products), but also for the manufacture of consumer goods based on rubber, creams or waxes. The 3D volume control helps to reduce waste and downtime and to save costs.



Type of sensor	Material front pane / LED window	Protection rating / protection class	Angle of aperture [°]	Max. field of view size [m]	Order no.
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**PMD 3D sensors · Type O3D · M12 connector · Housing material: Aluminium**

PMD 3D ToF chip	Gorilla glass / polyamide	IP 65, IP 67 / III	40 x 30	2.61 x 3.47	<b>O3D300</b>
PMD 3D ToF chip	Gorilla glass / polyamide	IP 65, IP 67 / III	60 x 45	3.75 x 5.00	<b>O3D302</b>
PMD 3D ToF chip	Gorilla glass / polyamide	IP 65, IP 67 / III	70 x 51	4.00 x 5.50	<b>O3D304</b>

**PMD 3D sensors · Type O3D · M12 connector · Housing material: Stainless steel**

PMD 3D ToF chip	PMMA / polyamide	IP 65, IP 67, IP 69K / III	40 x 30	2.61 x 3.47	<b>O3D310</b>
PMD 3D ToF chip	PMMA / polyamide	IP 65, IP 67, IP 69K / III	60 x 45	3.75 x 5.00	<b>O3D312</b>
PMD 3D ToF chip	PMMA / polyamide	IP 65, IP 67, IP 69K / III	70 x 51	4.00 x 5.50	<b>O3D314</b>

**Technical data volume control**

Operating distance	[m]	0.3...5
Max. handling unit size		64 objects
Minimum size of objects	[mm]	
Object speed: 0...0.2 m/s		25
Object speed: > 0.2 m/s		45
Sampling rate / switching frequency	[Hz]	
The image repetition frequency is reduced by using the position tracking function		10

**Further technical data**

Operating voltage	[V DC]	20.4...28.8
Current consumption	[mA]	< 2400 peak current pulsed; typ. mean value 420
Current rating (per switching output)	[mA]	100
Short-circuit protection, pulsed		•
Overload protection		•
Ambient temperature	[°C]	-10...50
Real chip resolution		25,000 / 100,000
Resulting resolution		176 x 132 pixels
Function display	LED	2 x yellow, 2 x green
Illumination		850 nm, infrared
Immunity to extraneous light	[klx]	8 (up to 100 klx possible with reduced measuring accuracy and repeatability)
Trigger		external; 24 V PNP/NPN according to IEC 61131-2 type 3
Switching inputs		2 (configurable), 24 V PNP/NPN according to IEC 61131-2 type 3
Switching outputs digital		3 (configurable), 24 V PNP/NPN, according to IEC 61131-2
Switching outputs analogue		1 (can be configured as current output 4...20 mA or voltage output 0...10 V)
Parameter setting interface Ethernet		10 Base-T / 100 Base-TX
Parameter setting options		via PC / notebook
Dimensions (H, W, D)	[mm]	72 x 67.1 x 95

**Accessories**

Design	Description	Order no.
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**Mounting accessories**

	Mounting set for O3D	<b>E3D301</b>
	Dissipators	<b>E3D302</b>
	Double cooling element	<b>E3D304</b>
	Heat conductor	<b>E3D303</b>

**Connection technology**

	Ethernet, cross-over patch cable, 2 m, PVC cable, M12 / RJ45	<b>E11898</b>
	Ethernet, jumper cable, 2 m, PVC cable, M12 / M12	<b>E21138</b>
	Socket, M12, 2 m black, PUR cable, 8-pole	<b>E11950</b>

We reserve the right to make technical alterations without prior notice. · 11/2018