Depalletising of uniform packages made easy

3D sensors

- **Depalletising of a complete layer or individual packages**
- **Slip sheet detection**
- **Calculation of the remaining items**
- **Integrated collision avoidance**
- **Automatic calibration of robot camera coordinates**
- **Economic and ergonomic**

IP 65 IP 67

High-grade stainless steel

Ethernet

EtherNet/IP

IP 69 K

PROFINET

Optimisation of logistic processes

The automatic depalletising of packages of the same size, e.g. cardboard boxes, crates, outer packaging or containers, optimises logistic processes by dynamic feeding.

The 3D sensor detects displaced loads and compensates for incorrect positioning with the depalletising system. Position indication allows fully automated depalletising of complete layers or individual packages, independent of the palletising pattern. Besides the data for robot control, the Ethernet process interface provides information for the material and warehouse management software.

Automated depalletising systems provide a clear increase in performance by means of economic tools and reduce the employees' load due to ergonomically optimised working environments.

Type of sensor	Material front pane / LED window	Protection rating / protection class	Angle of aperture [°]	Max. field of view size [m]	Order no.
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	**O3D300**
PMD 3D ToF chip	Gorilla glass / polyamide	IP 65, IP 67 / III	60 x 45	3.75 x 5.00	**O3D302**
PMD 3D ToF chip	Gorilla glass / polyamide	IP 65, IP 67 / III	70 x 51	4.00 x 5.50	**O3D304**
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	**O3D310**
PMD 3D ToF chip	PMMA / polyamide	IP 65, IP 67, IP 69K / III	60 x 45	3.75 x 5.00	**O3D312**
PMD 3D ToF chip	PMMA / polyamide	IP 65, IP 67, IP 69K / III	70 x 51	4.00 x 5.50	**O3D314**

Technical data depalletising systems		
Operating distance	[m]	0.5...6
Object types		Closed rectangular objects
Min. object size	[mm]	50 x 50 x 50 (at minimum operating distance)
Typical accuracy Object position	[mm]	± 15
Typical accuracy for angle of rotation	[°]	± 3
Sampling rate / switching frequency	[Hz]	1

Accessories

Design	Description	Order no.
Mounting accessories		
	Mounting set for O3D	**E3D301**
	Dissipators	**E3D302**
	Double cooling element	**E3D304**
	Heat conductor	**E3D303**
Connection technology		
	Ethernet, cross-over patch cable, 2 m, PVC cable, M12 / RJ45	**E11898**
	Ethernet, jumper cable, 2 m, PVC cable, M12 / M12	**E21138**
	Socket, M12, 2 m black, PUR cable, 8-pole	**E11950**

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
Possible parameter settings		via PC / notebook
Dimensions (H, W, D)	[mm]	72 x 67.1 x 95