



Industrial imaging

Collision protection for automated guided vehicle systems



3D cameras



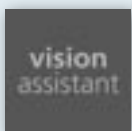
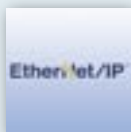
3D camera also detects obstacles above the detection zone of conventional safety laser scanners

The system optimises the collision warning based on speed and steering angle

Safe detection even in case of difficult obstacles

Three-dimensional detection in driving direction: 60° x 45°

Unaffected by ambient light



Powerful obstacle recognition

Collisions of automated guided vehicles in indoor areas with protruding or suspended objects and other obstacles must be avoided under all circumstances. For this purpose, ifm offers the ODS (Obstacles Detection System) collision protection system, which consists of a PMD 3D camera and intelligent integrated software. Supplementing the mandatory safety laser scanner, it monitors the manoeuvring range in three dimensions and can even detect obstacles positioned higher up, such as forklift arms, high-speed doors or crane hooks.

Intelligent prediction

The unit features three collision warning levels. Both the speed and the steering angle are taken into account. This prevents unnecessary braking and provides optimum protection during all vehicle manoeuvres.



Interface	Type of sensor	Material Front lens / LED window	Protection rating/ protection class	Angle of aperture [°]	Max. field of view size [m]	Order no.
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**PMD 3D camera · O3D type · M12 connector · housing material: aluminium
Obstacle detection for collision avoidance**

Ethernet PMD 3D ToF chip Gorilla glass / PA IP 65, IP 67 / III 60 x 45 3.2 x 4.52 **O3DC02**

Technical data Collision avoidance

Operating distance	[m]	0.2...2 (4)
Response time	[s]	< 1
Minimum height of objects above ground	[cm]	15
Typ. objects		Boxes, fork arms (lateral), bicycles, AGVs,...

Further technical data

Operating voltage	[V DC]	20.4...28.8
Current consumption	[mA]	< 2400 peak current pulsed; typ. mean value 1600
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
Lighting		850 nm, infrared
Immunity to extraneous light	[klx]	8 (up to 100 klx possible with reduced measuring accuracy and repeatability)
Parameter setting interface Ethernet		10 Base-T /100 Base-TX
Parameter setting options		Via PC / notebook
Dimensions (H, W, D)	[mm]	72 x 65 x 95

Accessories

Type	Description	Order no.
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Mounting accessories

	Mounting set for O3D	E3D301
	Cooling element	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

We reserve the right to make technical alterations without prior notice. · 11.2020