



# Vision Sensor

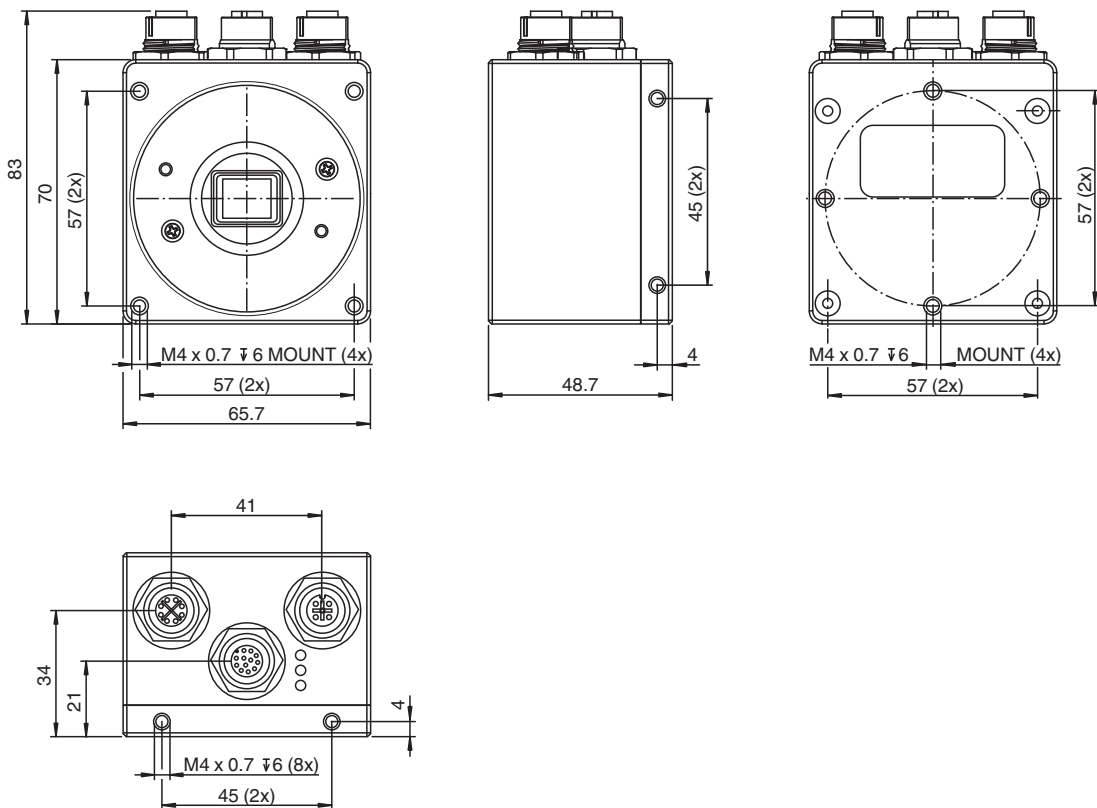
## VOS5000-F227-C-S

- Wide range of detection tools for flexible inspection tasks
- Combinable vision tools for feature detection, completeness checking, code reading, text recognition and object position checking
- 32 Jobs on-board can be saved
- Exchangeable lens (C-Mount)
- Easy integration with flexible programmable data output

Vision sensor for advanced object detection; Resolution: 2560 x 2048 pixels; Light source: external illumination; Lens: C-mount connection



### Dimensions



### Technical Data

#### General specifications

Light source	External lighting
Picture detail	dependant of operating distance (see manual)

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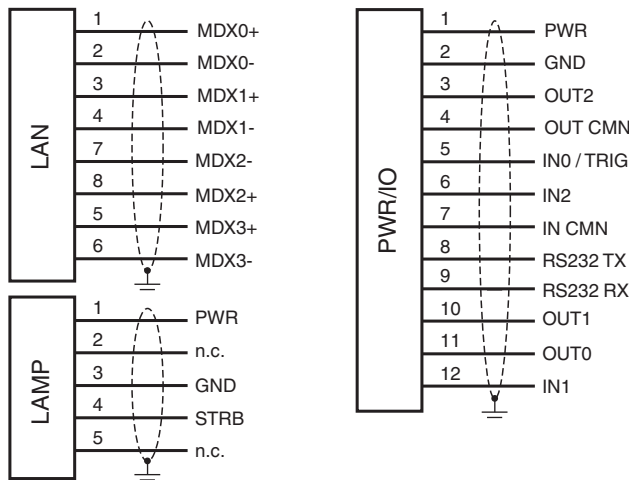
## Technical Data

Trigger mode	Free-running or triggered externally		
Depth of focus	± 5 % of the operating distance		
Resolution	2560 x 2048 pixels		
Image sensor	1" CMOS monochrom Global Shutter 5 µm pixel size		
<b>Parameterization/software</b>			
Parameter assignment	Parameterization via PC user interface VCT Tool		
<b>Evaluation procedure</b>			
Positioning and Guidance	Based on Parts or product marks, up to four Locators to detect X,Y shift and rotation		
Identification and Verification	OCR, 1-D and 2-D codes		
Detection & Pattern Matching	Pixel-, contour- or edge count		
Measuring	Distance, angle, circle size (after calibration)		
<b>Indicators/operating means</b>			
LED 1	Steady blue: sensor started, not set up Steady green: job loaded, ready for execution Flashing green: job loaded and being executed, capture in progress Steady red: sensor fault		
LED 2	Flashing blue: starting (duration approx. 20 seconds) Steady green: measurement successful (Pass) Steady blue: measurement borderline (Recycle) Steady red: measurement unsuccessful (Fail)		
LED 3	Steady blue: warm reset or restart Steady red/green/yellow: network activity		
<b>Electrical specifications</b>			
Operating voltage	U <sub>B</sub>	21 ... 30 V DC	
No-load supply current	I <sub>0</sub>	300 mA	
<b>Interface 1</b>			
Interface type	Ethernet		
Protocol	PROFINET IO TCP/IP EtherNet/IP		
<b>Fieldbus</b>			
Fieldbus type	PROFINET PN IO		
Function	Data interface (result output, job change), trigger interface		
PROFINET specification	V2.2		
Real-time communication	PROFINET IO Real-Time (RT)		
PROFINET conformance class	Conformance Class A		
Refresh time	typ. 128 ms ( depending on vision application )		
Input data	264 Byte - Generic		
Output data	264 Byte - Generic		
Transfer rate	1 GBit/s		
<b>Interface 2</b>			
Interface type	RS-232 , serial		
Transfer rate	115.2 kBit/s		
<b>Input</b>			
Input type	optically decoupled Inputs		
Input voltage	Logic low (OFF): 0 ... 3 V Logic high (ON): 11 ... 30 V Switching threshold: 12 V		
Control input	Image capture trigger + 2 general purpose inputs 2 inputs can be used for job switching		
Input current	8 mA ( typical )		
Internal protection circuit	3 kΩ / 4000 V ( rms )		
Switching delay	Switch-on time (ON): 20 µs Switch-off time (OFF): 10 µs Image capture trigger: 62 µs (until image capture is triggered)		
<b>Output</b>			
Output type	3 general purpose outputs , freely programmable , optically decoupled		

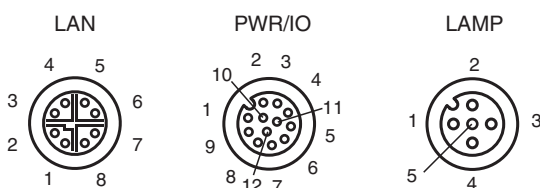
## Technical Data

Switching voltage	max. 30 V
Switching current	max. 200 mA each output
Switching delay	Switch-on time (ON): 400 µs Switch-off time (OFF): 80 µs
<b>Standard conformity</b>	
Emitted interference	EN 61000-6-4:2007+A1:2011
Noise immunity	EN 61000-6-2:2005
<b>Approvals and certificates</b>	
Approvals	CE
<b>Ambient conditions</b>	
Ambient temperature	0 ... 50 °C (32 ... 122 °F)
Storage temperature	-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>	
Degree of protection	IP67 (with mounted lens protection cover)
Connection	5-pin M12 socket ; 8-pin M12 socket X-coded ; 12-pin M12 socket
Material	
Housing	anodized aluminum
Installation	Mounting bracket
Mass	450 g
Objective connection	C-mount connection for external lens with different focal lengths
<b>Dimensions</b>	
Height	48 mm
Width	66 mm
Length	83 mm

## Connection Assignment



## Connection



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