EyeCheck 9xx & 1xxx

Smart Camera

From Vision to Quality

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1. Overview

EyeCheck 9xx und *1xxx* Serie

EyeCheck 9xx

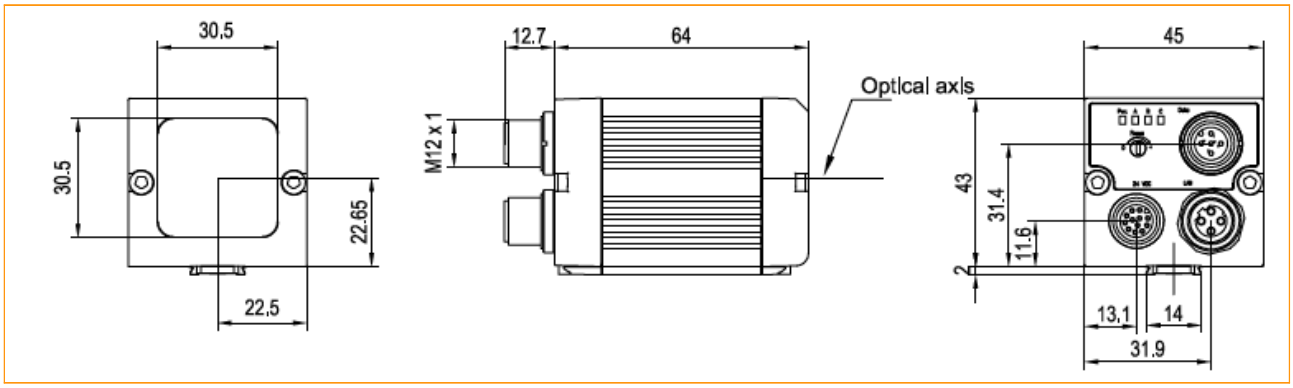
Model	Resolution	Focal Length	Integrated illumination	Processor
EC900	640 x 480	6, 12, 25 mm	white, red or infrared LEDs	600 MHz
EC901	640 x 480	C-Mount	none	600 MHz
EC910	736 x 480	6, 12, 25 mm	white, red or infrared LEDs	600 MHz
EC911	736 x 480	C-Mount	none	600 MHz

EyeCheck 1xxx

Model	Resolution	Focal Length	Integriated illumination	Processor
EC1000	640 x 480	6, 12, 25 mm	white, red or infrared LEDs	1 GHz
EC1001	640 x 480	C-Mount	none	1 GHz
EC1010	736 x 480	6, 12, 25 mm	white, red or infrared LEDs	1 GHz
EC1011	736 x 480	C-Mount	none	1 GHz
EC1200	1024 x 768	12 mm	white, red or infrared LEDs	1 GHz
EC1201	1024 x 768	C-Mount	none	1 GHz
EC1300	1280 x 1024	12 mm	white, red or infrared LEDs	1 GHz
EC1301	1280 x 1024	C-Mount	none	1 GHz

2. EyeCheck: EC1200, EC1300

Focal Length: 12 mm



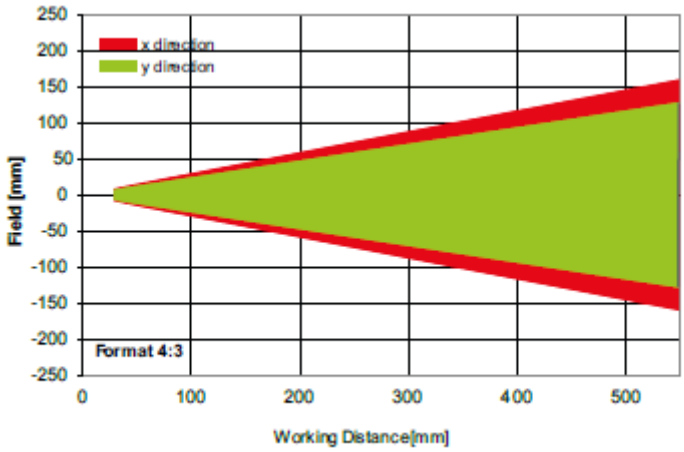
Optical Data	
CMOS sensor	1/1.8“ monochrome or color sensor
Integrated lens, focal length	12 mm, adjustable focal position
Adjustment range	30 mm to infinity
Integrated illumination	white, red or infrared LEDs
Minimum field of view X x Y	16 x 13 mm²

Electrical Data	
Operating voltage +U_B	18 … 26.4 VDC
Current consumption (without illumination and I/O)	≤ 120 mA
Current consumption (without I/O)	≤ 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection of all outputs
Power On Delay	ca. 13 s after Power on
Outputs	PNP/NPN (switchable)
Max. output current (per output)	50 mA, 100 mA (pin 12)
Inputs	PNP/NPN High > U_B -1V, Low < 3V
Input resistance	> 20 kΩ
Encoder input	High > 4V
Interfaces	Ethernet (LAN), RS422, RS232, EtherNet / IP, PROFINET
Inputs / Outputs	1 Input, 3-4 Outputs, 4 selectable inputs/outputs

Mechanical Data	
Dimensions	65 x 45 x 45 mm (without plug)
Enclosure rating	IP 67
Material housing	Aluminium, plastic
Material front screen	Plastic
Ambient temperature: operation	0 … +50° C (80 % air humidity)
Ambient temperature: storage	- 20... + 60° C (80 % air humidity)
Weight	ca. 160 g
Plug connections	Supply and I/O M12, 12-polig, Ethernet M12, 4-polig Data M12, 5-polig
Vibration and impact resistance	EN 60947-5-2

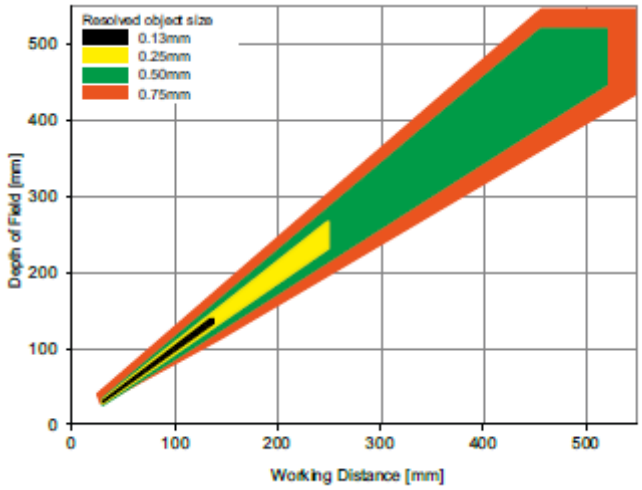
Field of View

Focal length: 12 mm



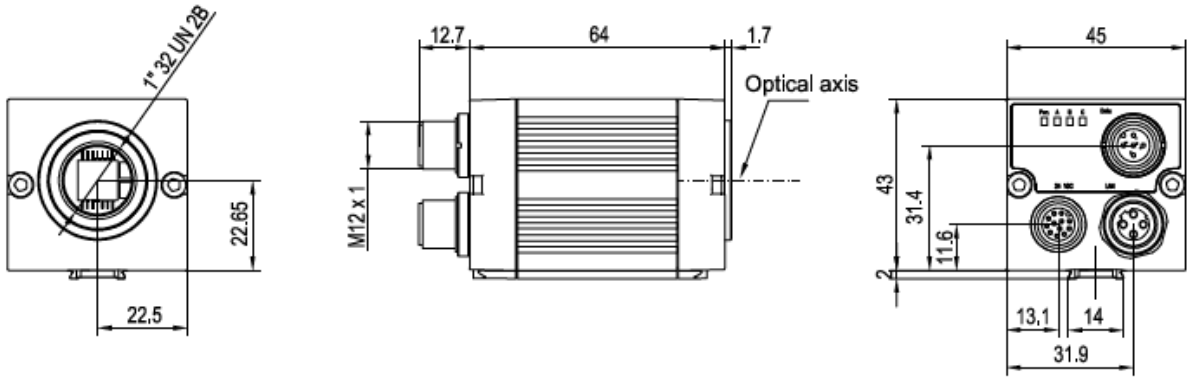
Depth of field: Normal

Focal length: 12 mm Depth of focus: Normal



3. EyeCheck: EC1201, EC1301

C-Mount



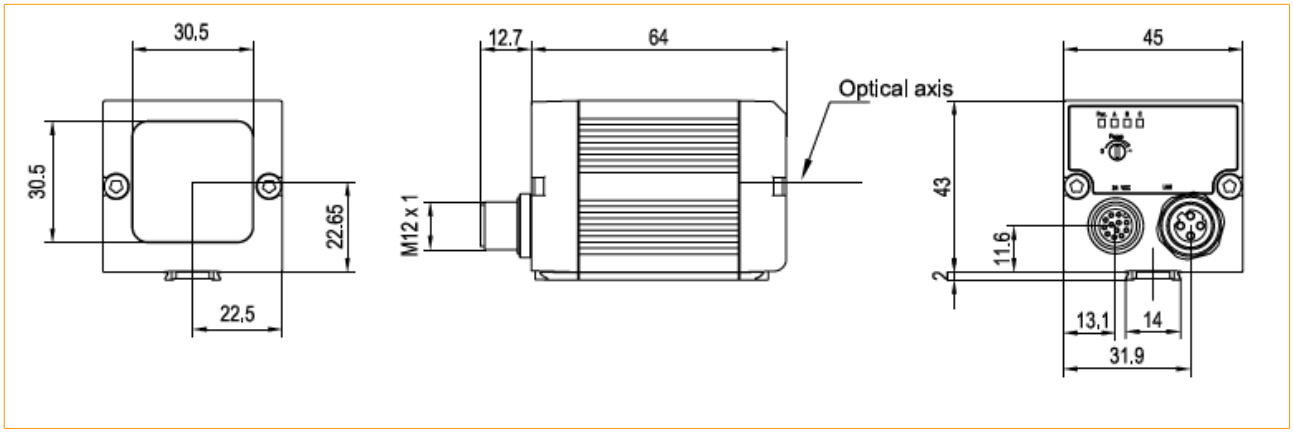
Optical Data	
CMOS sensor	1/1.8“ monochrome or color sensor
Integrated lens, focal length	C-Mount
Adjustment range	Depends on lens
Integrated illumination	none
Minimum field of view X x Y	Depends on lens

Electrical Data	
Operating voltage +U_B	18 … 26.4 VDC
Current consumption (without illumination and I/O)	≤ 120 mA
Current consumption (without I/O)	≤ 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection of all outputs
Power On Delay	ca. 13 s after Power on
Outputs	PNP/NPN (switchable)
Max. output current (per output)	50 mA, 100 mA (pin 12)
Inputs	PNP/NPN High > U_B -1V, Low < 3V
Input resistance	> 20 kΩ
Encoder input	High > 4V
Interfaces	Ethernet (LAN), RS422, RS232, EtherNet / IP, PROFINET
Inputs / Outputs	1 Input, 3-4 Outputs, 4 selectable inputs/outputs

Mechanical Data	
Dimensions	65 x 45 x 45 mm³ (without plug)
Enclosure rating	IP 65
Material, housing	Aluminium, plastic
Material, front screen	plastic
Ambient temperature: operation	0 … +50° C (at 80 % air humidity)
Ambient temperature: storage	- 20... + 60° C (at 80 % air humidity)
Weight	ca. 160 g
Plug connections	Supply and I/O M12, 12-pin, Ethernet M12, 4-pin Daten M12, 5-pin
Vibration and impact resistance	EN 60947-5-2

4. EyeCheck: EC900, EC910, EC1000, EC1010

4.1. Focal length: 6 mm

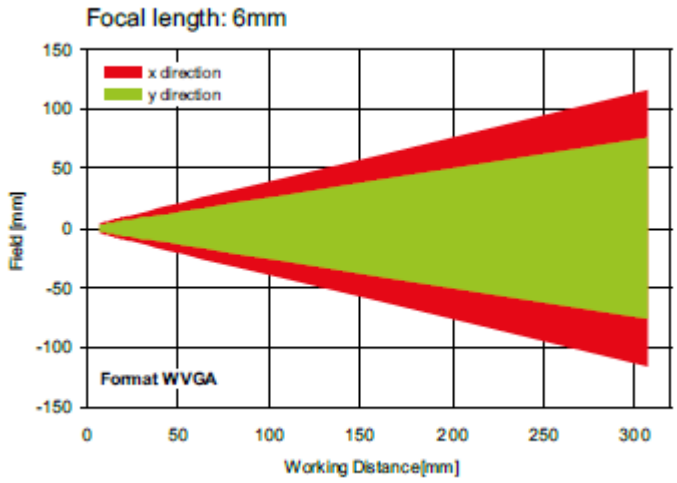


Optical Data	
CMOS sensor	1/3“, monochrome or color sensor
Integrated lens, focal length	6 mm, adjustable focal position
Adjustment range	6 mm to infinity
Integrated illumination	White, red, infrared LEDs
Minimum field of view X x Y	5 x 4 mm²

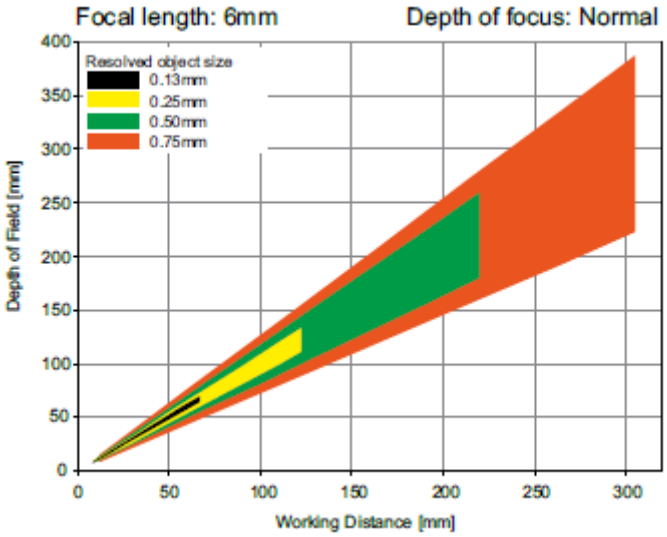
Electrical Data	
Operating voltage +U_B	18 … 26.4 VDC
Current consumption (without illumination and I/O)	≤ 120 mA
Current consumption (without I/O)	≤ 200 mA
Protective circuits	Reverse-polarity protection U_B / Short-circuit protection of all outputs
Power On Delay	ca. 13 s after Power on
Outputs	PNP/NPN (switchable)
Max. output current (per output)	50 mA, 100 mA (pin 12)
Inputs	PNP/NPN High > U_B -1V, Low < 3V
Input resistance	> 20 kΩ
Interfaces	Ethernet (LAN), EtherNet / IP, PROFINET
Inputs/Outputs	1 Input, 3-4 Outputs, 4 selectable inputs/outputs

Mechanical Data	
Dimensions	65 x 45 x 45 mm³ (without plug)
Enclosure rating	IP 67
Material, housing	Aluminium, plastic
Material, front screen	Plastic
Ambient temperature: operation	0 … +50° C (at 80 % air humidity)
Ambient temperature: storage	- 20... + 60° C (at 80 % air humidity)
Weight	ca. 160 g
Plug connections	Supply and I/O M12, 12-pin, Ethernet M12, 4-pin
Vibration and impact resistance	EN 60947-5-2

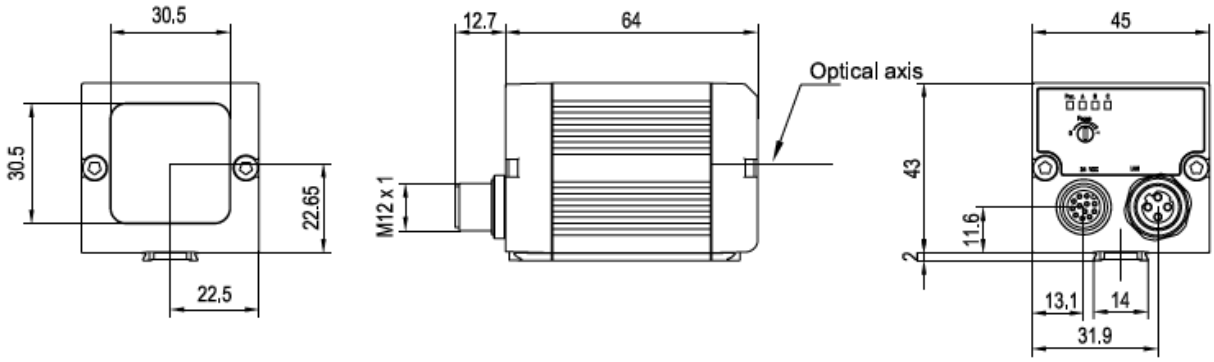
Field of View



Depth of Field: Normal



4.2. Focal length: 12 mm

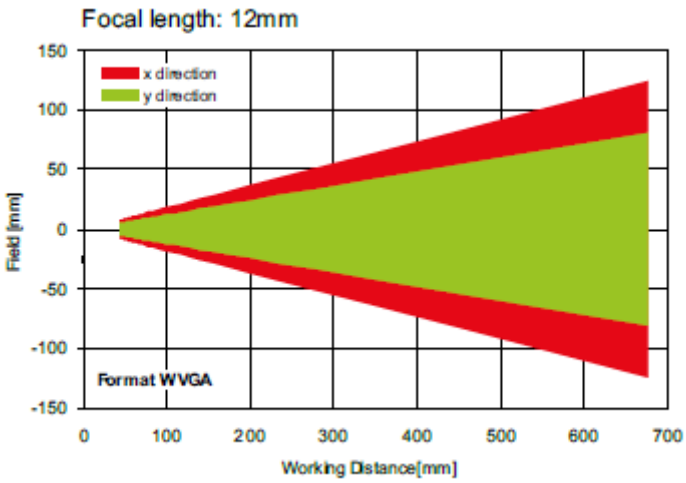


Optical Data	
CMOS sensor	1/3“, monochrome or color sensor
Integrated lens, focal length	12 mm, adjustable focal position
Adjustment range	30 mm to infinity
Integrated illumination	White, red, infrared LEDs
Minimum field of view X x Y	8 x 6 mm²

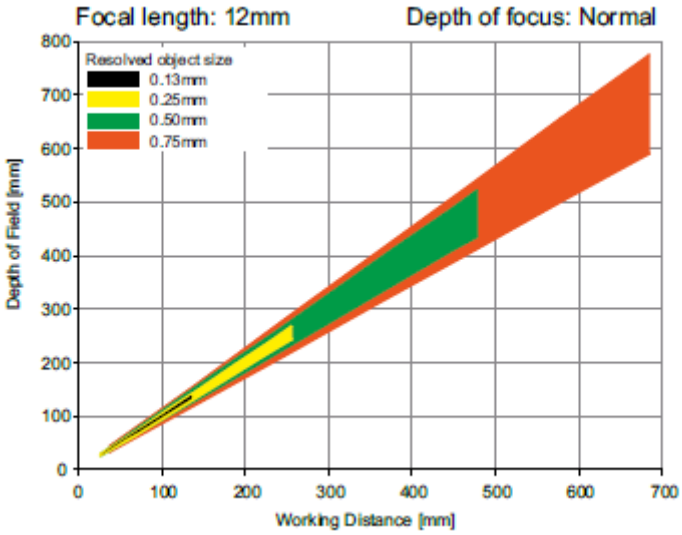
Electrical Data	
Operating voltage +U_B	18 … 26.4 VDC
Current consumption (without illumination and I/O)	≤ 120 mA
Current consumption (without I/O)	≤ 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection of all outputs
Power On Delay	ca. 13 s after Power on
Outputs	PNP/NPN (switchable)
Max. output current (per output)	50 mA, 100 mA (pin 12)
Inputs	PNP/NPN High > U_B -1V, Low < 3V
Input resistance	> 20 kΩ
Interfaces	Ethernet (LAN), EtherNet / IP, PROFINET
Inputs / outputs	1 Input, 3-4 Outputs, 4 selectable inputs/outputs

Mechanical Data	
Dimensions	65 x 45 x 45 mm³ (without plug)
Enclosure rating	IP 67
Material, housing	Aluminium, plastic
Material, front screen	plastic
Ambient temperature: operation	0 … +50° C (at 80 % air humidity)
Ambient temperature: storage	- 20... + 60° C (at 80 % air humidity)
Weight	ca. 160 g
Plug connections	Supply and I/O M12, 12-pin, Ethernet M12, 4-pin Data M12, 5-pin
Vibration and impact resistance	EN 60947-5-2

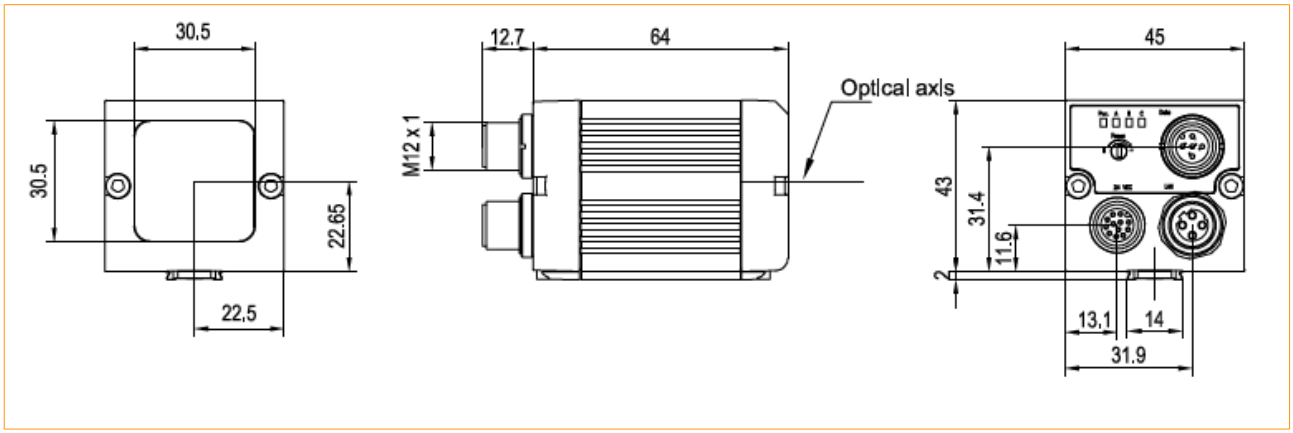
Field of View



Depth of field: Normal



4.3. Focal length: 25 mm

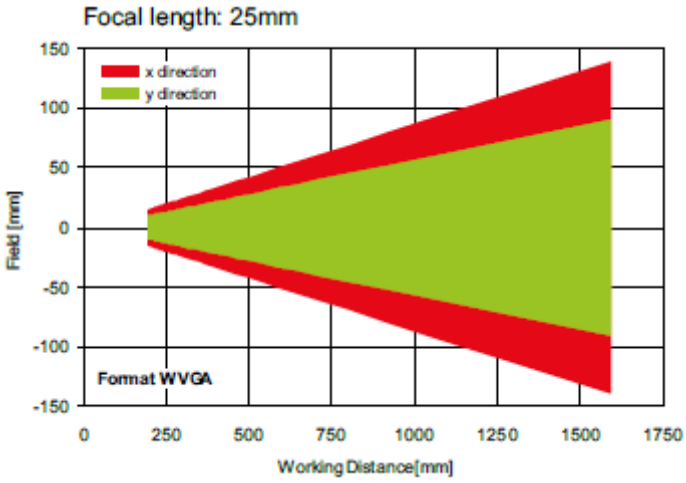


Optical Data	
CMOS sensor	1/3“, monochrome or color sensor
Integrated lens, focal length	25 mm, adjustable focal position
Adjustment range	140 mm to infinity
Integrated illumination	White, red, infrared LEDs
Minimum field of view X x Y	18 x 14 mm²

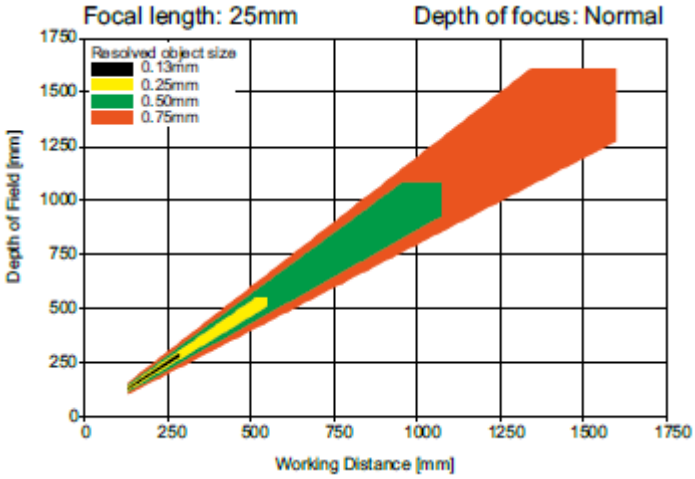
Electrical Data	
Operating voltage +U_B	18 … 26.4 VDC
Current consumption (without illumination and I/O)	≤ 120 mA
Current consumption (without I/O)	≤ 200 mA
Protective circuits	Reverse-polarity protection U_B / short-circuit protection of all outputs
Power On Delay	ca. 13 s after Power on
Outputs	PNP/NPN (switchable)
Max. output current (per output)	50 mA, 100 mA (pin 12)
Inputs	PNP/NPN High > U_B -1V, Low < 3V
Input resistance	> 20 kΩ
Encoder Input	High > 4V
Interfaces	Ethernet (LAN), EtherNet / IP, PROFINET
Inputs / Outputs	1 Input, 3-4 Outputs, 4 selectable inputs/outputs

Mechanical Data	
Dimensions	65 x 45 x 45 mm³ (without plug)
Enclosure rating	IP 67
Material, housing	Aluminium, plastic
Material, front screen	plastic
Ambient temperature: operation	0 … +50° C (at 80 % air humidity)
Ambient temperature: storage	- 20... + 60° C (at 80 % air humidity)
Weight	ca. 160 g
Plug connections	Supply and I/O M12, 12-pin, Ethernet M12, 4-pin Data M12, 5-pin
Vibration and impact resistance	EN 60947-5-2

Field of View

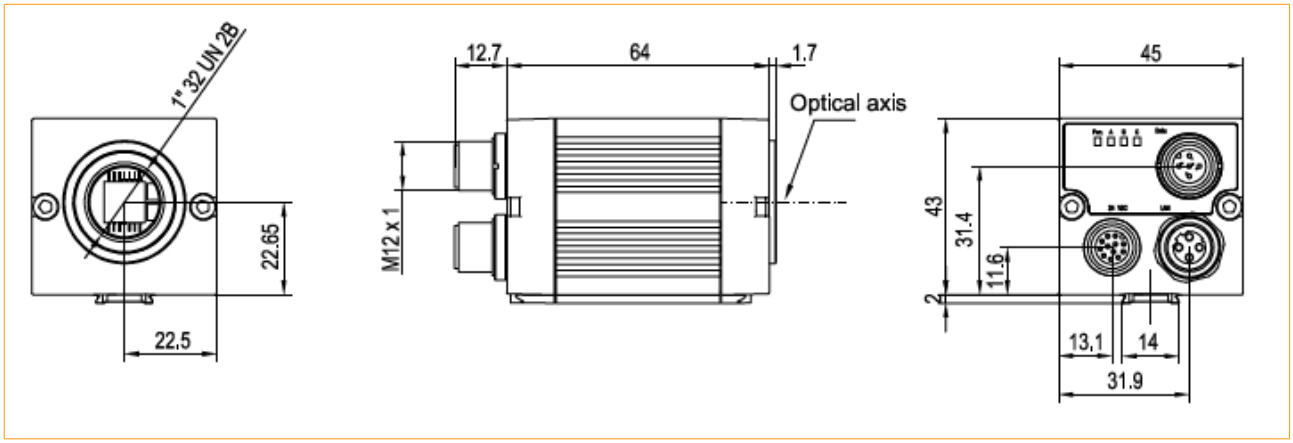


Depth of Field



5. EyeCheck: EC900, EC910, EC1001, EC1011

C-Mount



Optical Data	
CMOS Sensor	1/3“, monochrome or color sensor
Integrated lens, focal length	C-Mount
Adjustment range	Depends on lens
Integrated illumination	none
Minimum field of view X x Y	Depends on lens

Electrical Data	
Operating voltage +U_B	18 … 26.4 VDC
Current consumption (without illumination and I/O)	≤ 120 mA
Current consumption (without I/O)	≤ 200 mA
Protective circuits	Reverse-polarity protection U_B / short-circuit protection of all outputs
Power On Delay	ca. 13 s after Power on
Outputs	PNP/NPN (switchable)
Max. output current (per output)	50 mA, 100 mA (pin 12)
Inputs	PNP/NPN High > U_B -1V, Low < 3V
Input resistance	> 20 kΩ
Encoder Input	High > 4V
Interfaces	Ethernet (LAN), RS422, RS232, EtherNet / IP, PROFINET
Inputs / Outputs	1 Input, 3-4 Outputs, 4 selectable inputs/outputs

Mechanical Data	
Dimensions	65 x 45 x 45 mm³ (without plug)
Enclosure rating	IP 65
Material, housing	Aluminium, plastic
Material, front screen	plastic
Ambient temperature: operation	0 … +50° C (at 80 % air humidity)
Ambient temperature: storage	- 20... + 60° C (at 80 % air humidity)
Weight	ca. 160 g
Plug connections	Supply and I/O M12, 12-pin, Ethernet M12, 4-pin Data M12, 5-pin
Vibration and impact resistance	EN 60947-5-2