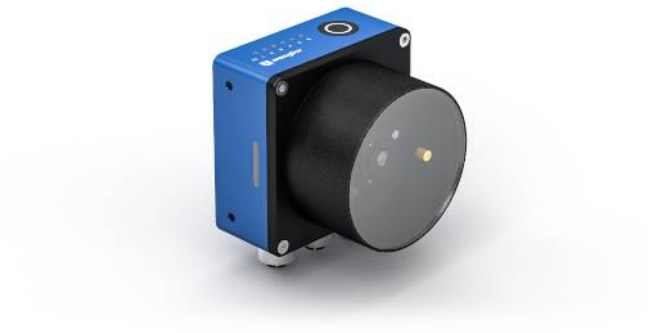
Smart Camera

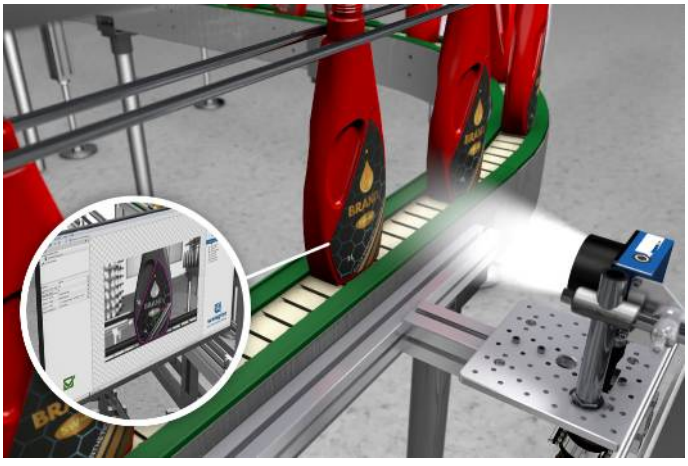
B60P111

Part Number



- **Computing power of vision system in sensor format**
- **Condition monitoring (including position monitoring via position sensor)**
- **Expandable, modular hardware design**
- **State-of-the-art communication interfaces incl. PoE functionality**
- **User-friendly vision tools paired with individual programming**

The Smart Camera B60 offers the functionality and performance of a full-fledged image processing system and is therefore suitable for even complex image processing applications. Image recording and evaluation by the high-performance, easy-to-use uniVision image processing software are combined in a compact and robust modular housing. Thanks to the uniVision Script license package, users can switch flexibly between parametrization and programming solutions. Seamless integration of HALCON scripts enables secure and flexible data exchange.

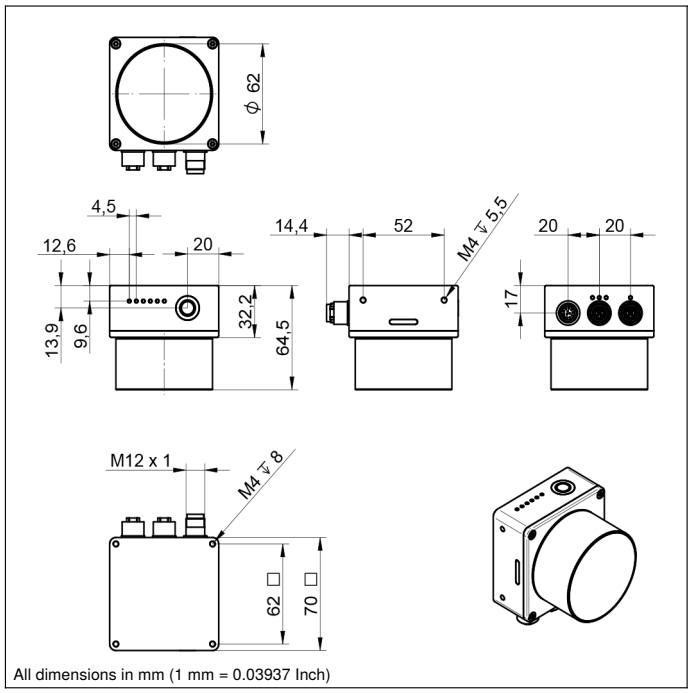


Technical Data

Optical Data	
Working Range	> 50 mm
Resolution	1440 × 1080 Pixel
Resolution	1,6 MP
Focal distance	6 mm
Image Chip	color
Image chip size	1/2,9"
Pixel Size	3,45 × 3,45 µm
Light Source	Z60F illumination module
Optics	Auto-focus wide
Laser Class (EN 60825-1)	1
Frame Rate	≤ 40 fps
Environmental conditions	
Temperature Range	0...40 °C
Storage temperature	0...70 °C
Atmospheric humidity	5...95%, non-condensing
Shock resistance per DIN IEC 68-2-27	30 g / 11 ms
Vibration resistance per DIN EN 60068-2-64	6 g (10...55 Hz)
Electrical Data	
Supply Voltage	24 V DC
Current Consumption (Ub = 24 V)	< 500 mA
Inputs/Outputs	6
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Interface	Ethernet
Baud Rate Ethernet	1 Gbit/s
Baud Rate PROFINET	100 Mbit/s
Industry protocols	PROFINET Class B
General protocols	FTP
General protocols	sFTP
General protocols	TCP/IP
General protocols	UDP
Protection Class	III
RAM	2 GB
Storage Capacity	16 GB
Mechanical Data	
Minimum object distance	50 mm
Housing Material	Aluminum, anodised
Optic Cover	Plastic, PMMA
Degree of Protection	IP67
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1, 8-pin, X-coded (2×)
Web server	yes
License package	uniVision Script
PNP NO	●
Control Panel No.	B5

Complementary Products

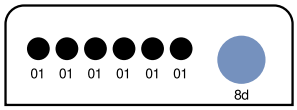
Connection cables
Filter
Heat sink
License B60 uniVision Robot Vision
Z60F lighting module
ZVZJ calibration plate



All dimensions in mm (1 mm = 0.03937 Inch)

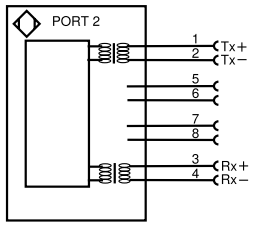
Ctrl. Panel

B5

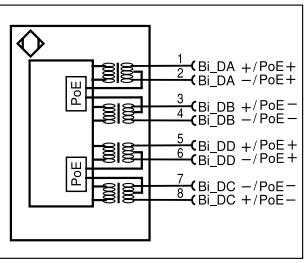


01 = Switching Status Indicator
8d = button

002



008



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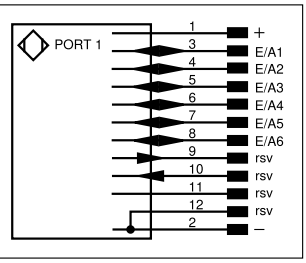

Legend					
+	Supply Voltage +	nc	Not connected	EN_{RS422}	Encoder B/B̄ (TTL)
–	Supply Voltage 0 V	U	Test Input	EN_A	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	EN_B	Encoder B
A	Switching Output (NO)	W	Trigger Input	A_{MIN}	Digital output MIN
Ā	Switching Output (NC)	W–	Ground for the Trigger Input	A_{MAX}	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	A_{OK}	Digital output OK
V̄	Contamination/Error Output (NC)	O–	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	A_{MV}	Valve Output	O_{LT}	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY–	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⏚	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
	IO-Link	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower over Ethernet	Tx+/–	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
$EN_{0\ RS422}$	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	EN_{ARS422}	Encoder A/Ā (TTL)		