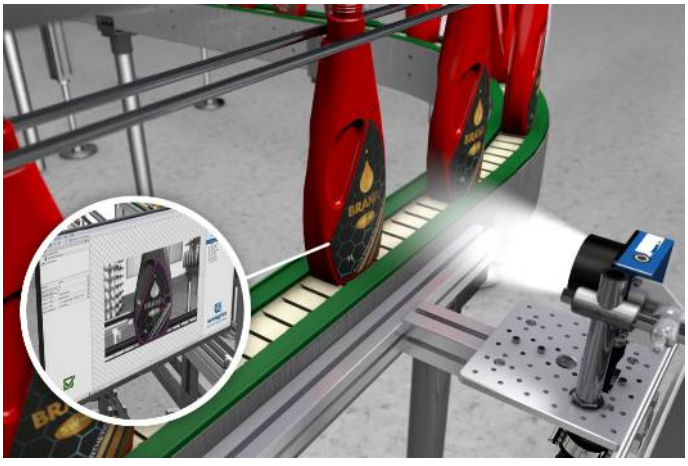
Smart Camera

B60M213

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**

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. Additional software modules can be added at any time using upgrade licenses.

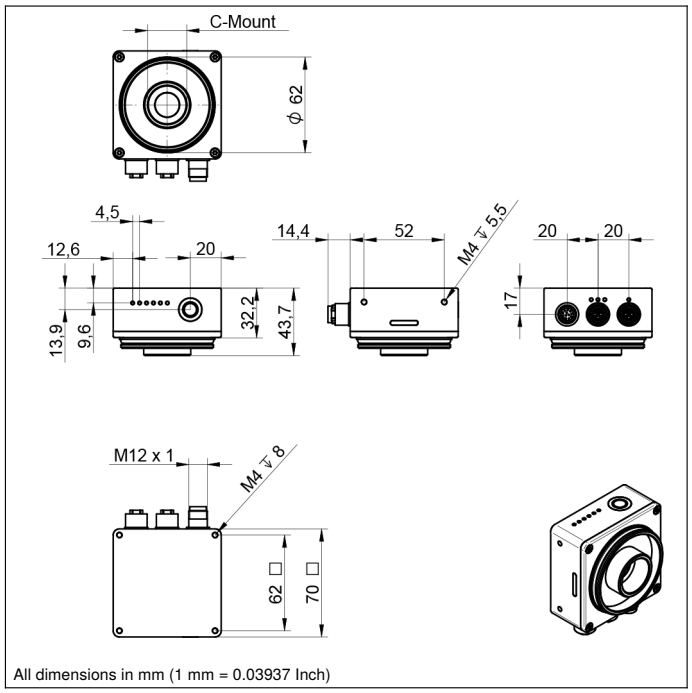


Technical Data

Optical Data	
Lens thread	C-Mount
Resolution	2448 × 2048 Pixel
Resolution	5 MP
Image Chip	color
Image chip size	1/1,8"
Pixel Size	2,74 × 2,74 µm
Light Source	External lighting
Optics	C mount
Frame Rate	≤ 40 fps
Environmental conditions	
Temperature Range	0...40 °C
Storage temperature	0...70 °C
Atmospheric humidity	5…95%, non-condensing
Electrical Data	
Supply Voltage	21,6...26,4 V DC
Current Consumption (Ub = 24 V)	< 400 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
Protection Class	III
RAM	2 GB
Storage Capacity	16 GB
Mechanical Data	
Housing Material	Aluminum, anodised
Optic Cover	Glass
Degree of Protection	IP67
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1, 8-pin, X-coded (2×)
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)
Web server	yes
License package	uniVision
PNP NO	●
PROFINET-I/O, CC-B	●
Control Panel No.	B5

Complementary Products

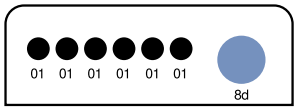
C mount filter
C mount lens
Connection cables
Heat sink
License B60 uniVision Extended
License B60 uniVision Robot Vision
License B60 uniVision Script
Protective tube Z60S
ZVZJ calibration plate



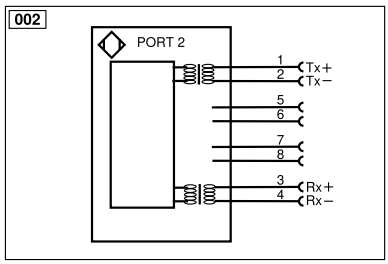
All dimensions in mm (1 mm = 0.03937 Inch)

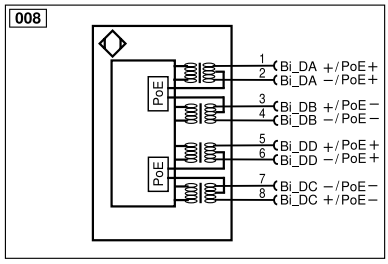
Ctrl. Panel

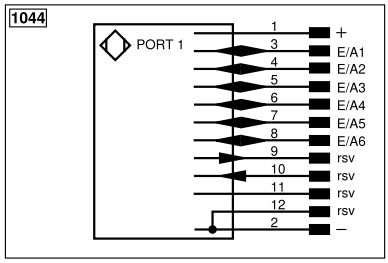
B5



01 = Switching Status Indicator
8d = button







Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
–	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENB	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W–	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	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	AMV	Valve Output	OLT	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
EN0 RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		

Visual Field

2 \ 1	100 mm	200 mm	400 mm	600 mm
ZVZG100	78x58 mm	161x120 mm	326x245 mm	492x369 mm
ZVZG101	57x43 mm	119x89 mm	243x183 mm	368x276 mm
ZVZG102	36x27 mm	78x58 mm	161x120 mm	243x183 mm
ZVZG103	26x20 mm	57x43 mm	119x89 mm	181x136 mm
ZVZG104	15x11 mm	35x26 mm	75x56 mm	114x86 mm
ZVZG105	9x7 mm	23x18 mm	52x39 mm	80x60 mm
ZVZG106	–	14x11 mm	35x26 mm	55x41 mm

1 = working distance

2 = lens