

Vision Sensor

B50S002

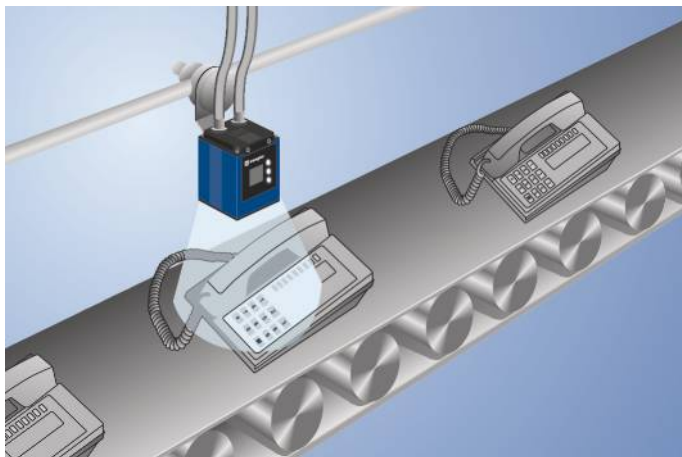
Part Number

weQubeVision



- Image processing functions
- MultiCore technology

The vision sensor weQubeVision is based on the weQube MultiCore technology. The functions autofocus, region of interest and tracking ensure optimal object detection. The following image processing modules are available: Dimensional accuracy check, sorting procedures, presence control, object counting, position output, pixel counting, filter options, and statistics evaluation.



Technical Data

Optical Data	
Working Range	≥ 20 mm
Resolution	736 × 480 Pixel
Image Chip	monochrome
Light Source	White Light
Service Life (T = +25 °C)	100000 h
Visual Field	see Table 1
Frame Rate	25 Hz

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 200 mA
Response Time	40 ms
Temperature Range	-25...55 °C*
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	RS-232/Ethernet
Protection Class	III

Mechanical Data	
Setting Method	Ethernet
Housing Material	Aluminum
Degree of Protection	IP67
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.

Safety-relevant Data	
MTTFd (EN ISO 13849-1)	227,7 a

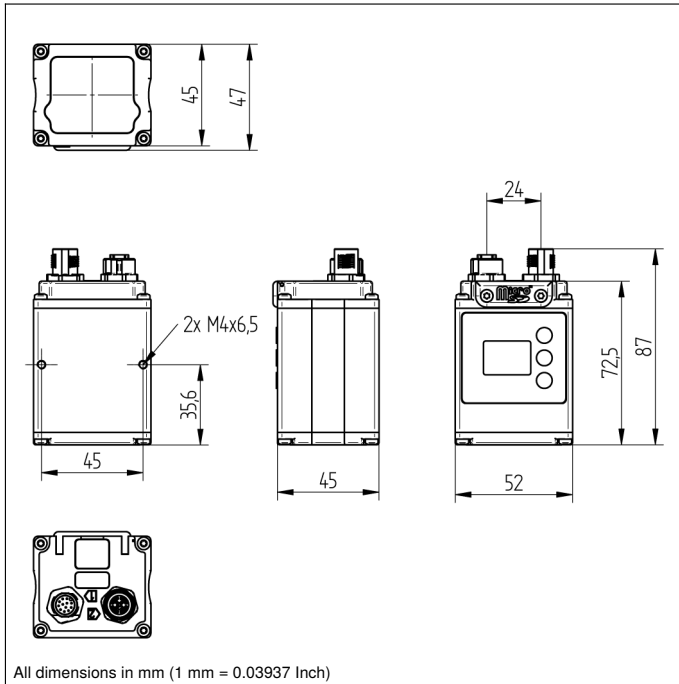
Function	
Presence Check	yes
Pixel Comparison	yes
Reference Image Comparison	yes
Tracking	yes
Object detection	yes
Dimensional accuracy check	yes
Web server	yes

Configurable as PNP/NPN/Push-Pull	<input checked="" type="checkbox"/>
Switchable to NC/NO	<input checked="" type="checkbox"/>
Illumination Output	<input checked="" type="checkbox"/>
RS-232 Interface	<input checked="" type="checkbox"/>
Ethernet	<input checked="" type="checkbox"/>
Connection Diagram No.	002 1008
Control Panel No.	X2
Suitable Connection Technology No.	50 87
Suitable Mounting Technology No.	560

Display brightness may decrease with age. This does not result in any impairment of the sensor function.
 * -25 °C: Ambient conditions should not result in condensation; avoid the formation of ice on the front panel!
 55 °C: Continuous illumination at max. 1% or flash mode at 100% brightness with an exposure time of ≤ 5 ms; may affect the service life of the product.

Complementary Products

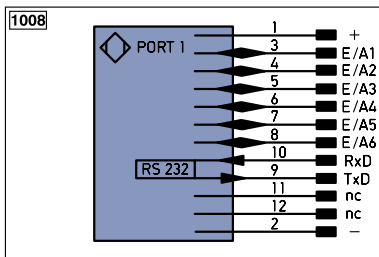
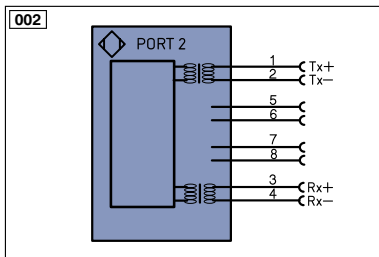
Disk with Polarization Filter ZNNG004
Illumination Technology
License Upgrade, weQube Pattern Matching DNNL006
Protective Housing ZNNS001, ZNNS002
Software
weQubeDecode License Upgrade DNNL002
weQubeOCR License Upgrade DNNL003



Ctrl. Panel



20 = Enter Button
 22 = UP Button
 23 = Down Button
 60 = Display



Legend		Wire Colors according to DIN IEC 757	
+	Supply Voltage +	BK	Black
-	Supply Voltage 0 V	BN	Brown
~	Supply Voltage (AC Voltage)	RD	Red
A	Switching Output (NO)	OG	Orange
Ā	Switching Output (NC)	YE	Yellow
V	Contamination/Error Output (NO)	GN	Green
∇	Contamination/Error Output (NC)	BU	Blue
E	Input (analog or digital)	VT	Violet
T	Teach Input	GY	Grey
Z	Time Delay (activation)	WH	White
S	Shielding	PK	Pink
RxD	Interface Receive Path	GNYE	Green/Yellow
TxD	Interface Send Path		
RDY	Ready		
GND	Ground		
CL	Clock		
E/A	Output/Input programmable		
IO-Link	IO-Link		
PoE	Power over Ethernet		
IN	Safety Input		
OSSD	Safety Output		
Signal	Signal Output		
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)		
EN0 RS422	Encoder 0-pulse 0-0 (TTL)		
PT	Platinum measuring resistor		
nc	not connected		
U	Test Input		
U	Test Input inverted		
W	Trigger Input		
O	Analog Output		
O-	Ground for the Analog Output		
BZ	Block Discharge		
AWV	Valve Output		
a	Valve Control Output +		
b	Valve Control Output 0 V		
SY	Synchronization		
E+	Receiver-Line		
S+	Emitter-Line		
≠	Grounding		
SnR	Switching Distance Reduction		
Rx+/-	Ethernet Receive Path		
Tx+/-	Ethernet Send Path		
Bus	Interfaces-Bus A(+)/B(-)		
La	Emitted Light disengageable		
Mag	Magnet activation		
RES	Input confirmation		
EDM	Contactur Monitoring		
ENAR5422	Encoder A/Ā (TTL)		
ENBR5422	Encoder B/B̄ (TTL)		
ENa	Encoder A		
ENb	Encoder B		
AMIN	Digital output MIN		
AMAX	Digital output MAX		
AOK	Digital output OK		
SY In	Synchronization In		
SY OUT	Synchronization OUT		
OLt	Brightness output		
M	Maintenance		

Table 1

Working Distance	20 mm	200 mm	1000 mm
Visual Field	16 × 12 mm	120 × 90 mm	600 × 450 mm

