

Vision Sensor

B50S102

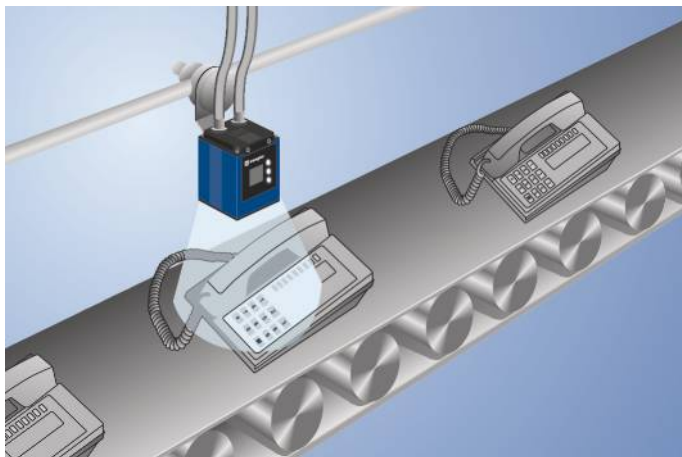
Part Number

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	Infrared 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)	230,41 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	●
Switchable to NC/NO	●
Illumination Output	●
RS-232 Interface	●
Ethernet	●
PROFINET	●
EtherNet/IP™	●

Connection Diagram No.	002 1008
Control Panel No.	X2
Suitable Connection Technology No.	50 87
Suitable Mounting Technology No.	560

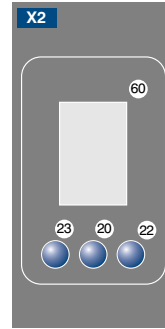
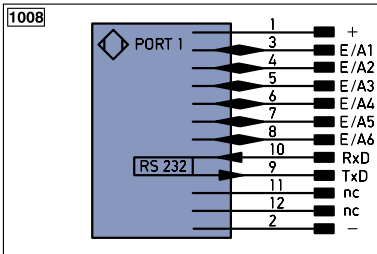
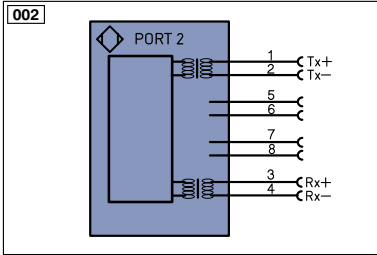
Display brightness may decrease with age. This does not result in any impairment of the sensor function.
 * -25 °C: Ambient conditions should not result in condensation; avoid the formation of ice on the front panel!
 55 °C: Continuous illumination at max. 1% or flash mode at 100% brightness with an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



All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

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

Legend

+ Supply Voltage +	PT Platinum measuring resistor	ENa Encoder A
- Supply Voltage 0 V	nc not connected	ENb Encoder B
~ Supply Voltage (AC Voltage)	U Test Input	AMIN Digital output MIN
A Switching Output (NO)	U Test Input inverted	AMAX Digital output MAX
Ā Switching Output (NC)	W Trigger Input	AOck Digital output OK
V Contamination/Error Output (NO)	O Analog Output	SY In Synchronization In
∇ Contamination/Error Output (NC)	O- Ground for the Analog Output	SY OUT Synchronization OUT
E Input (analog or digital)	BZ Block Discharge	OLt Brightness output
T Teach Input	Aw Valve Output	M Maintenance
Z Time Delay (activation)	a Valve Control Output +	
S Shielding	b Valve Control Output 0 V	
RxD Interface Receive Path	SY Synchronization	
TxD Interface Send Path	E+ Receiver-Line	
RDY Ready	S+ Emitter-Line	
GND Ground	≡ Grounding	
CL Clock	SnR Switching Distance Reduction	
E/A Output/Input programmable	Rx+/- Ethernet Receive Path	
IO-Link	Tx+/- Ethernet Send Path	
PoE Power over Ethernet	Bus Interfaces-Bus A(+)/B(-)	
IN Safety Input	La Emitted Light disengageable	
OSSD Safety Output	Mag Magnet activation	
Signal Signal Output	RES Input confirmation	
Bl_D+/- Ethernet Gigabit bidirect. data line (A-D)	EDM Contactor Monitoring	
EN0_0542 Encoder 0-pulse 0-0 (TTL)	ENa_0542 Encoder A/Ā (TTL)	
	ENb_0542 Encoder B/B̄ (TTL)	

Wire Colors according to DIN IEC 757

BK Black
BN Brown
RD Red
OG Orange
YE Yellow
GN Green
BU Blue
VT Violet
GY Grey
WH White
PK Pink
GNYE Green/Yellow

Table 1

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

