

Vision Sensor

B50S013

Part Number



- Image processing functions
- MultiCore technology
- Pattern matching

The vision sensor weQubeVision is based on the wenglor MultiCore technology. The functions 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, pattern matching, filter options, and statistics evaluation. Thanks to the integrated color image chip, all image processing functions are also available for remote applications.

weQubeVision

Technical Data

Optical Data

Lens thread	C-Mount
Resolution	736 × 480 Pixel
Image Chip	color
Image chip size	1/3"
Pixel Size	6 × 6 μm
Service Life (T = +25 °C)	100000 h
Frame Rate	15 Hz

Electrical Data

Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 200 mA
Response Time	66 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)	263,03 a
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Function

Presence Check	yes
Pixel Comparison	yes
Reference Image Comparison	yes
Tracking	yes
Object detection	yes
Dimensional accuracy check	yes
Pattern matching	yes

Web server	yes
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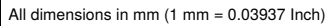
Configurable as PNP/NPN/Push-Pull	●
Switchable to NC/NO	●
Illumination Output	●
RS-232 Interface	●
Ethernet	●

Connection Diagram No.	002 1008
Control Panel No.	X2
Suitable Connection Equipment 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.

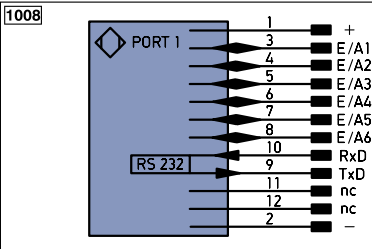
Complementary Products

Illumination Technology
Lens
Protective Housing ZSZ-0x-01
Software
weQubeDecode License Upgrade DNNL002
weQubeOCR License Upgrade DNNL003



A diagram showing a 3x3 grid with a 2x2 square in the center. The top-right cell of the grid contains the number 60. Below the grid are three blue circles with numbers 23, 20, and 22 above them respectively.

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



+	Supply Voltage +	nc	not connected
–	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W–	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
Ṽ	Contamination/Error Output (NC)	O–	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	AWV	Valve Output
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	SY–	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	⊕	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
	IO-Link	Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
QSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BL-D/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
EN0 r5422	Encoder 0-pulse 0-0 (TTL)	EDM	Contactor Monitoring

EN _{A542}	Encoder A/ $\bar{A}$ (TTL)
EN _{B542}	Encoder B/B (TTL)
EN _A	Encoder A
EN _B	Encoder B
A _{MIN}	Digital output MIN
A _{MAX}	Digital output MAX
A _{OK}	Digital output OK
SY _{In}	Synchronization In
SY _{OUT}	Synchronization OUT
O _L T	Brightness output
M	Maintenance
rsv	reserved

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

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