

Color Sensor

P1XF001

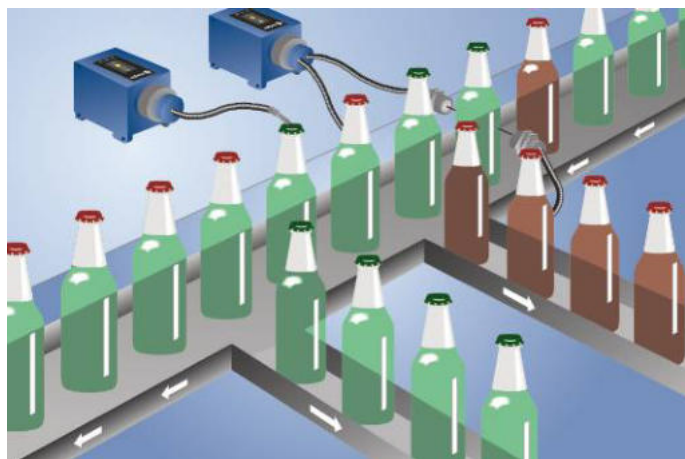
Part Number

6 Channel Multi Spectral Sensor



- 12 switching outputs for evaluation of detailed color analysis thanks to spectral measurement in ROYGBV color space
- Ready for Industrie 4.0 with IO-Link version 1.1
- Reliable evaluation of measured values even with distance fluctuation

The spectral composition of the colors of objects can be measured and metamerism effects can be compensated for with the 6-channel Multispectral Sensor. Innovative color chip technology divides the selected color spectrum into six spectral ranges (ROYGBV color space) with separately adjustable tolerance ranges. In combination with fiber-optic cables, the sensor adapts itself to the specific requirements of any given application and can be operated in the scanning as well as the through-beam mode. The P1XF001 is equipped with twelve switching outputs and integrated LED technology, which automatically ensures ideal adjustment of light intensity. Sensor settings can be selected directly at the graphical display (OLED), via the RS-232 port or via the IO-Link interface.



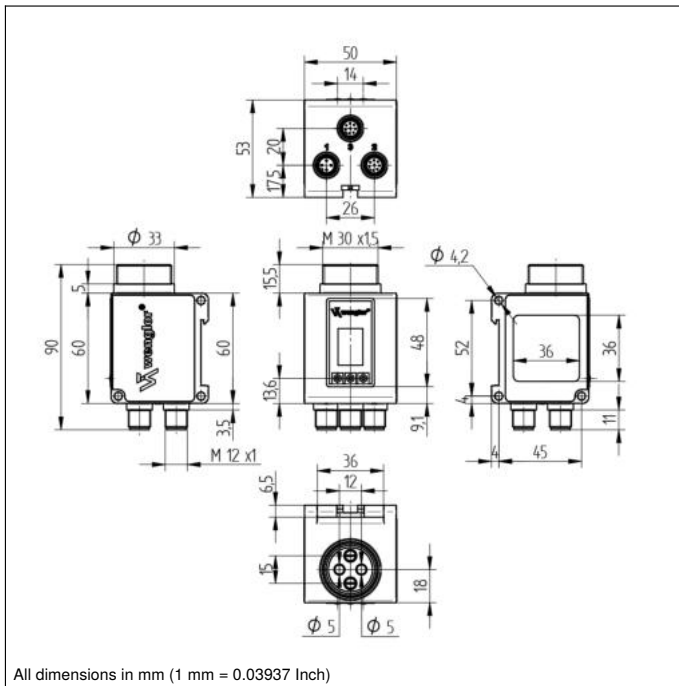
Technical Data

Optical Data	
Spectral Sensitivity	450...700 nm
Light Source	White Light
Service Life (T = +25 °C)	50000 h
Max. Ambient Light	10000 Lux
Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U _b = 24 V)	~ 260 mA
Switching Frequency	2 kHz
Response Time	~ 500 µs x filter
On-/Off-Delay	0...10000 ms
Temperature Range	-25...60 °C
Number of Switching Outputs	12
Switching Output Voltage Drop	1,5 V
PNP Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Teach Mode	FT
Interface	IO-Link V1.1/RS-232
Number of Digital Inputs	3
Protection Class	III
Mechanical Data	
Setting Method	Menu (OLED)
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 × 1; 4+8-pin
DIN-Rail mounting	35 mm
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	345,43 a
Function	
Selectable menu language	yes
Switchable to NC/NO	●
Configurable as PNP/NPN/Push-Pull	●
RS-232 Interface	●
IO-Link	●
Error Output	●
Contamination Output	●
Connection Diagram No.	127
Control Panel No.	X2
Suitable Connection Equipment No.	2 89

Display brightness may decrease with age. This does not result in any impairment of the sensor function.

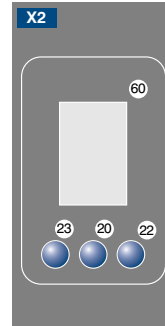
Complementary Products

Glass Fiber-Optic Cable
Interface Cable S232W3
IO-Link Master
Lens LA27
Plastic Fiber-Optic Cable
Software



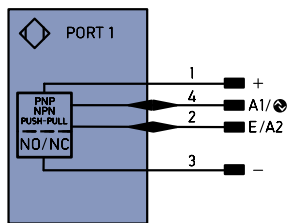
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

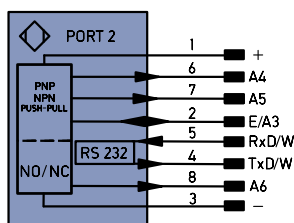


20 = Enter Button
22 = UP Button
23 = Down Button
60 = Display

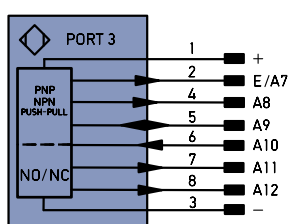
127



128



129



Legend

+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	U	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
Ṽ	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	AWV	Valve Output
S	Shielding	a	Valve Control Output +
RxD	Interface Receive Path	b	Valve Control Output 0 V
TxD	Interface Send Path	SY	Synchronization
RDY	Ready	SY-	Ground for the Synchronization
GND	Ground	E+	Receiver-Line
CL	Clock	S+	Emitter-Line
E/A	Output/Input programmable	±	Grounding
IO-Link	IO-Link	sR	Switching Distance Reduction
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path
IN	Safety Input	Tx+/-	Ethernet Send Path
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)
Signal	Signal Output	La	Emitted Light disengageable
BLD+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation
EN0/RS422	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation
		EDM	Contacting Monitoring

ENAR5422	Encoder A/Ā (TTL)
ENB5422	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
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

Range

When the following fiber-optic cable is used

FL200_	600 mm	161-256-10_	0...25 mm
FL210_	50 mm	301-251-10_	0...50 mm
FL30/50	0...50 mm	Z96D001	0...10 mm
FL330_	18 mm	Z96D001+LA27	0...30 mm
FL340_	100 mm		

