

# Luminescence Sensor

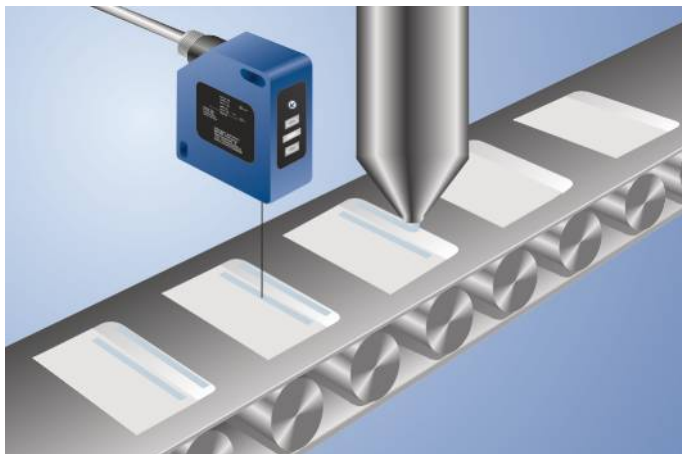
## A1P16QAT80

Part Number



- Digital read-out of intensity values via the RS-232 interface
- Recognition of luminescent marks
- Teach-in, dynamic teach-in, key potentiometer

The luminescence sensor detects with a receiver filter all luminescent markings which emit light within a wavelength range from 420-750 nm. With another receiver filter suppresses especially interfering whiteners. The sensors have a very small spot, and use a UV LED with a very long service life.

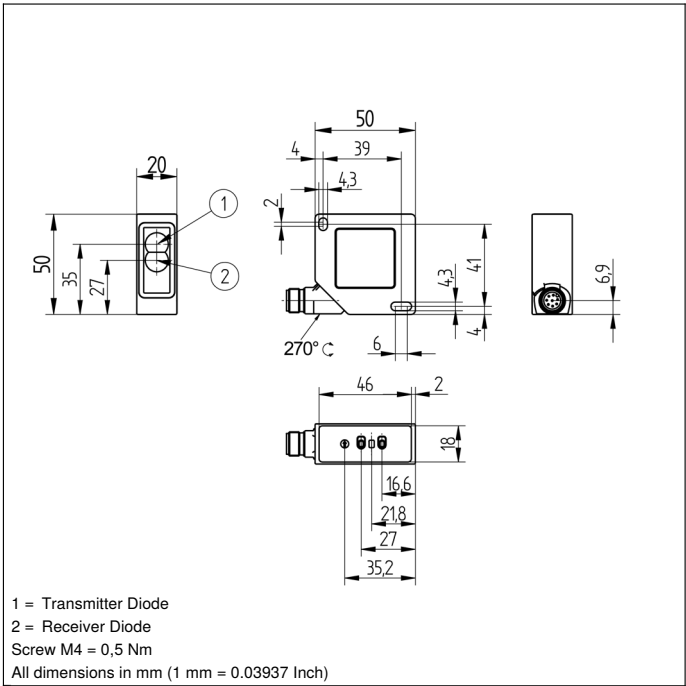


### Technical Data

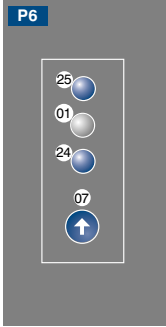
Optical Data	
Working Range	16...20 mm
Working Distance	18 mm
Receiving Range	420...750 nm
Switching Hysteresis	< 1 %
Light Source	UV Light
Wave Length	375 nm
Service Life (T = +25 °C)	100000 h
Risk Group (EN 62471)	2
Max. Ambient Light	10000 Lux
Spot Diameter	3 mm
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 50 mA
Switching Frequency	2500 Hz
Response Time	200 µs
On-/Off-Delay	0...100 ms
Temperature Drift	< 1 %
Temperature Range	-25...60 °C
Switching Outputs	2
Switching Output Voltage Drop	1,5 V
Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Lockable	yes
Teach Mode	ZT, DT, TP
Interface	RS-232
Baud Rate	38400 Bd
Digital Inputs	2
Protection Class	III
Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 × 1; 8-pin
Configurable as PNP/NPN/Push-Pull	●
Switchable to NC/NO	●
RS-232 Interface	●
Connection Diagram No.	736
Control Panel No.	P6
Suitable Connection Technology No.	80
Suitable Mounting Technology No.	380

### Complementary Products

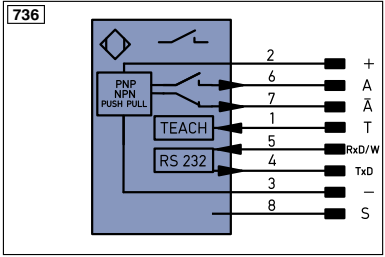
Feldbus Gateways ZAGxxxN01, EPGG001
Interface Cable S232W3
wTeach2 software DNNF005



### Ctrl. Panel



01 = Switching Status Indicator  
07 = Selector Switch  
24 = Plus Button  
25 = Minus Button



### Legend

+	Supply Voltage +
-	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ä	Switching Output (NC)
V	Contamination/Error Output (NO)
Ŵ	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)
EN0 RS422	Encoder 0-pulse 0-0 (TTL)

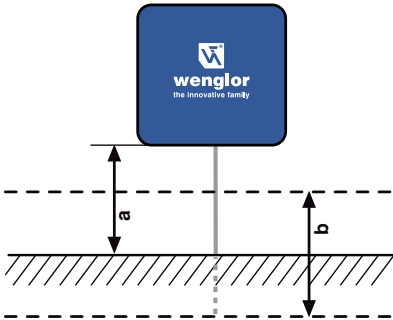
PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ů	Test Input inverted
W	Trigger Input
O	Analog Output
O-	Ground for the Analog Output
BZ	Block Discharge
AWV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
E+	Receiver-Line
S+	Emitter-Line
±	Grounding
SnR	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	Contact Monitoring
ENAR5429	Encoder A/Ä (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

### 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

### Ideal Working Distance



a = Working Distance  
b = Working Range

