

# Through-Beam Sensor

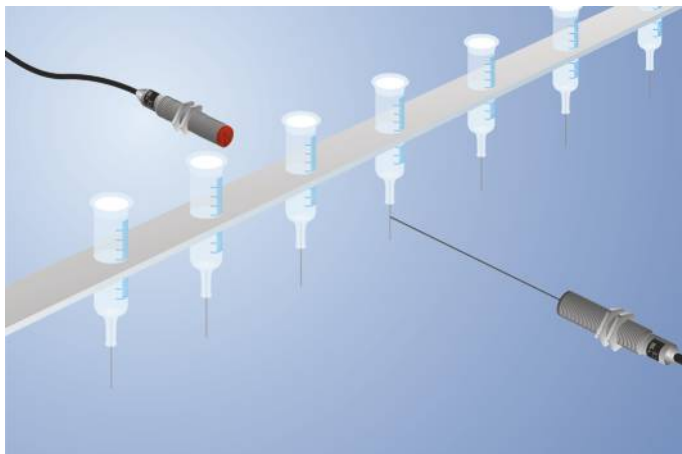
## ZD600PCVT3 LASER

Part Number



- Range: 60 m
- Smallest recognizable part: 0,05 mm
- Teach-in

These through-beam sensors are best suited for use in industrial environments. Thanks to their large working range, the devices demonstrate excellent functional reliability in highly contaminated environments. The sensors can be checked for correct functioning via the test input.



### Technical Data

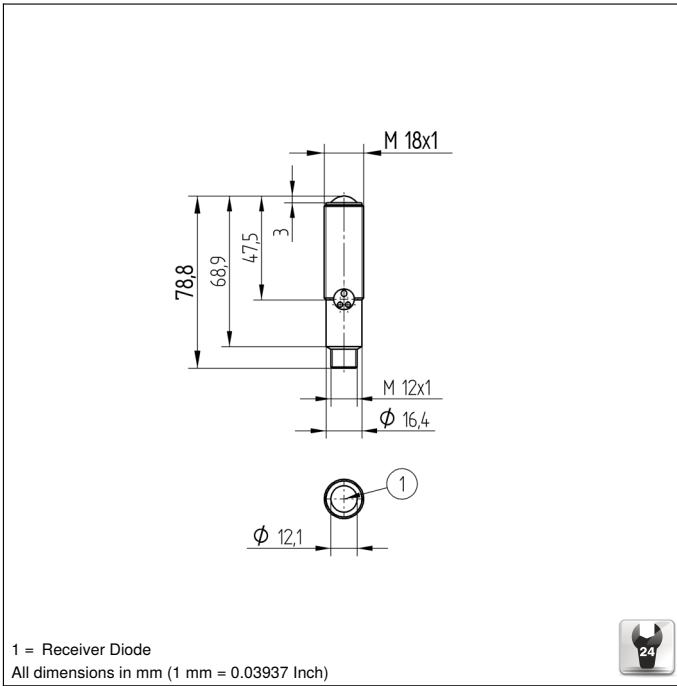
Optical Data	
Range	60000 mm
Smallest Recognizable Part	50 $\mu\text{m}$
Switching Hysteresis	< 15 %
Light Source	Laser (red)
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Opening Angle	12 °
Electrical Data	
Sensor Type	Receiver
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 15 mA
Switching Frequency	5 kHz
Response Time	100 $\mu\text{s}$
Temperature Drift	< 10 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	200 mA
Short Circuit and Overload Protection	yes
Reverse Polarity Protection	yes
Teach Mode	NT, MT
Protection Class	III
Mechanical Data	
Setting Method	Teach-In
Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 $\times$ 1; 4-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	2413,71 a
Contamination Output	●
PNP NO/NC switchable	●
Connection Diagram No.	154
Control Panel No.	D7
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	150

### Suitable Emitter

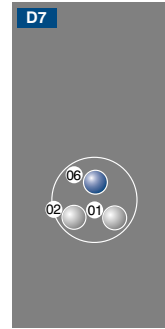
ZD6003
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### Complementary Products

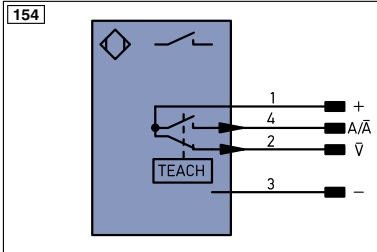
Dust Extraction Tube STAUBTUBUS-01
Lens LA7
PNP-NPN Converter BG2V1P-N-2M



### Ctrl. Panel



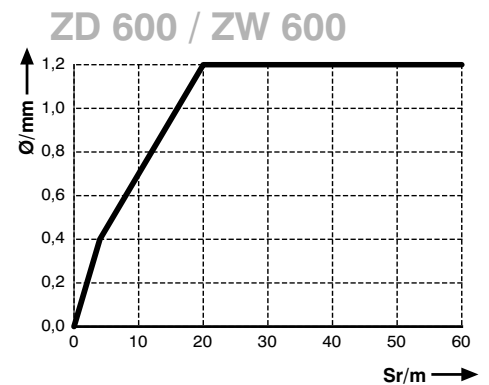
01 = Switching Status Indicator  
 02 = Contamination Warning  
 06 = Teach Button



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)	Ū	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
V̄	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	S <sub>n</sub> R	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	L <sub>a</sub>	Emitted Light disengageable
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation
EN0 <sub>RS422</sub>	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation
		EDM	Contactur Monitoring
		EN <sub>AR5422</sub>	Encoder A/Ā (TTL)
		EN <sub>BR5422</sub>	Encoder B/B̄ (TTL)
		EN <sub>A</sub>	Encoder A
		EN <sub>B</sub>	Encoder B
		A <sub>MIN</sub>	Digital output MIN
		A <sub>MAX</sub>	Digital output MAX
		A <sub>OK</sub>	Digital output OK
		SY <sub>In</sub>	Synchronization In
		SY <sub>OUT</sub>	Synchronization OUT
		OL <sub>T</sub>	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
		GNVE	Green/Yellow

### Smallest Recognizable Part

Based on the Distance between Emitter and Receiver



Sr = Switching Distance

Ø = Diameter, Smallest Recognizable Part

