

# Through-Beam Sensor

## EB77VB7K

Part Number



- Ample performance reserves
- Infrared light
- Insensitive to contamination

### Technical Data

#### Optical Data

Range	1500 mm
Switching Hysteresis	< 15 %
Light Source	Infrared Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	20 °

#### Electrical Data

Sensor Type	Receiver
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 10 mA
Switching Frequency	500 Hz
Response Time	1 ms
Temperature Drift	< 10 %
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
Residual Current Switching Output	< 50 µA
Short Circuit and Overload Protection	yes
Reverse Polarity Protection	yes
Protection Class	III

#### Mechanical Data

Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M8 × 1; 4-pin
Cable Length	20 cm

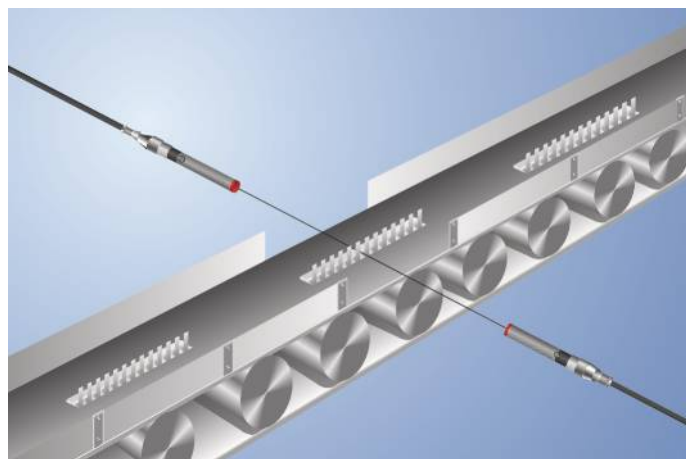
PNP NO

Connection Diagram No.	1021
Control Panel No.	B3
Suitable Connection Technology No.	7
Suitable Mounting Technology No.	200

### Suitable Emitter

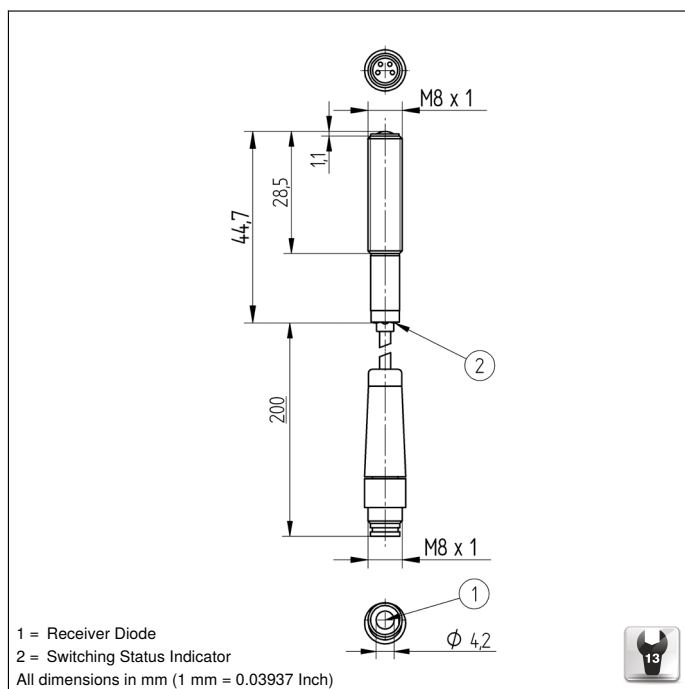
SB777K

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.

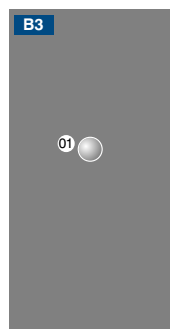


### Complementary Products

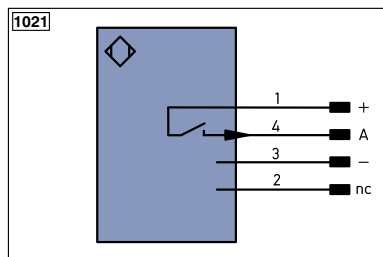
PNP-NPN Converter BG7V1P-N-2M



## Ctrl. Panel



01 = Switching Status Indicator



## 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
Ä	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
V	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	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	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
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)	EDM	Contactor Monitoring
EN0RS422	Encoder 0-pulse 0-0 (TTL)	ENAR5422	Encoder A/A (TTL)
		ENBR5422	Encoder B/B (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