Retro-Reflex Sensor
for Transparent Objects

KN88PDV3

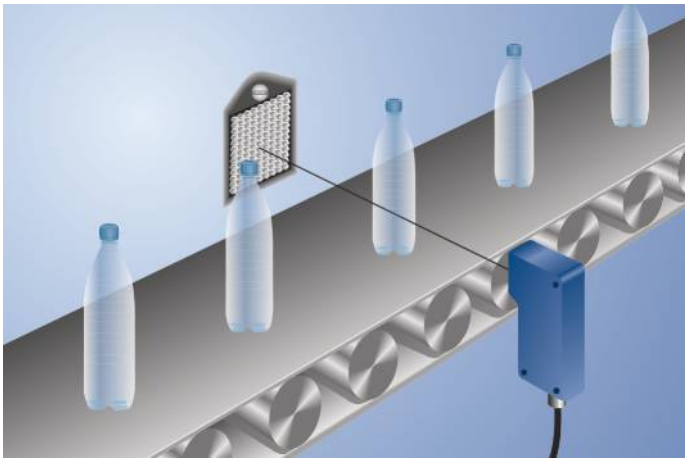
Part Number

- **Foil detection**
- **Recognition of clear glass**
- **Recognition of PET bottles**

Technical Data

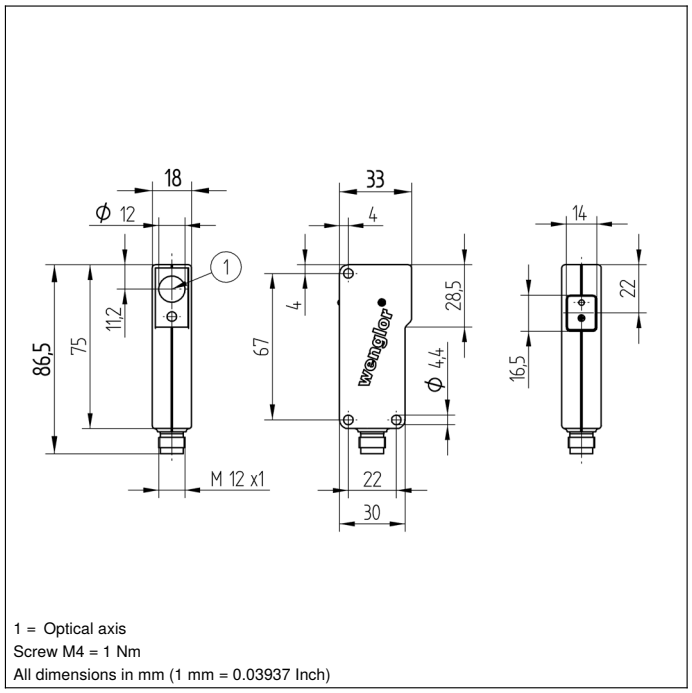
Optical Data	
Range	2600 mm
Reference Reflector/Reflector Foil	RQ100BA
Clear Glass Recognition	yes
Switching Hysteresis	< 5 %
Light Source	Red Light
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	3 °
Single-Lens Optic	yes
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 40 mA
Switching Frequency	2500 Hz
Response Time	200 µs
Temperature Drift	< 3 %
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Residual Current Switching Output	< 50 µA
PNP Contamination Output/Switching Current	50 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
Contamination Output	●
PNP NC	●
Connection Diagram No.	107
Control Panel No.	N1 No1
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	350

Retro-reflex sensors must be used in combination with a reflector and even crystal-clear objects and sheet products can be reliably recognized.



Complementary Products

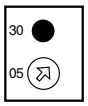
Dust Extraction Tube STAUBTUBUS-03
PNP-NPN Converter BG2V1P-N-2M
Reflector, Reflector Foil
Set Protective Housing ZSN-NN-02



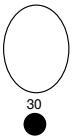
1 = Optical axis
Screw M4 = 1 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

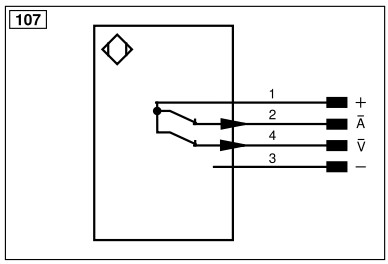
N1



Optic



05 = Switching Distance Adjuster
30 = Switching Status/Contamination Warning



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
–	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENB	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W–	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
V̄	Contamination/Error Output (NC)	O–	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	AMV	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY–	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⏚	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
	IO-Link	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower over Ethernet	Tx+/–	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN0 RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0...2,6 m	**RR25_M**	0...1 m
RE18040BA	0...1,4 m	**RR25KP**	0...0,7 m
RQ84BA	0...2,4 m	**RR21_M**	0...0,75 m
RR84BA	0...2,3 m	**ZRAE02B01**	0...1,2 m
RE9538BA	0...0,9 m	**ZRME01B01**	0...0,4 m
RE6151BM	0...2,3 m	**ZRME03B01**	0...1 m
RR50_A	0...2,3 m	**ZRMR02K01**	0...0,5 m
RE6040BA	0...2,5 m	**ZRMS02_01**	0...0,6 m
RE8222BA	0...0,95 m	**RF505**	0...0,8 m
RR34_M	0...1,3 m	**RF508**	0...0,8 m
RE3220BM	0...0,9 m	**RF258**	0...0,6 m
RE6210BM	0...0,75 m	**ZRDF__K01**	0...1,8 m