

Fiber Optic Cable Sensor

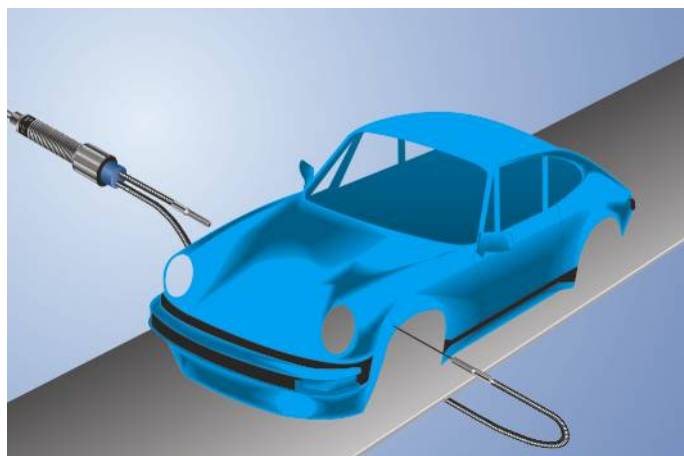
US88VCA3

Part Number



- Adaptable for glass fiber optic cables: reflex and through beam mode
- Large detection range

These sensors are equipped for use with glass fiber optic cables but can be used with or without one. The transmitter and receiver are located in a single housing. The sensor evaluates transmitted light reflected back from the object and the output is switched as soon as an object passes the selected range. Bright objects reflect more light than dark objects, and can thus be recognized from greater distances.



Technical Data

Optical Data

Range	2000 mm
Switching Hysteresis	< 15 %
Light Source	Infrared Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	12 °

Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 40 mA
Switching Frequency	1 kHz
Response Time	500 µs
Temperature Drift	< 10 %
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
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III

Mechanical Data

Setting Method	Potentiometer
Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP65
Explosion protection, Ignition protection mode	nA
Explosion protection, Category	3G
Connection	M12 × 1; 4-pin

PNP NO/NC switchable



Connection Diagram No.

1013

Control Panel No.

F1 Fo1

Suitable Connection Technology No.

2

Suitable Mounting Technology No.

130

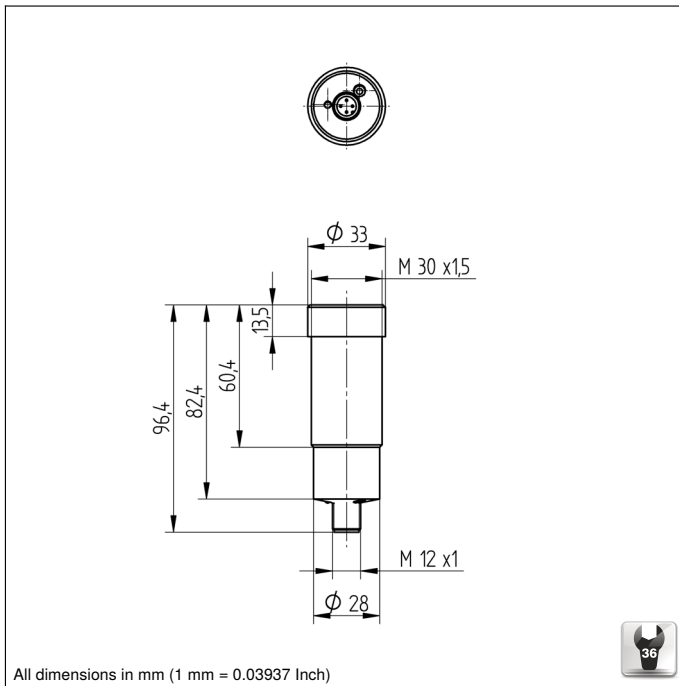
Suitable Fiber Optic Cable Adapter No.

05 06

Complementary Products

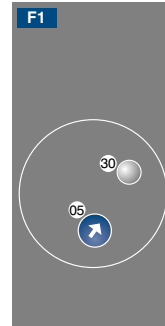
Glass Fiber Optic Cable

PNP-NPN Converter BG2V1P-N-2M

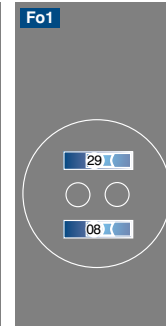


All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

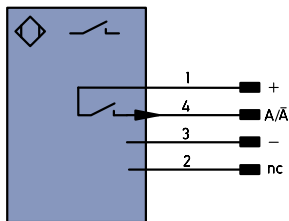


Optic



05 = Switching Distance Adjuster
08 = NO/NC Switch
29 = Sr/2 Switching Adjustment
30 = Switching Status/Contamination Warning

1013



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)	O	Analog Output
Ṽ	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	Contacteur Monitoring
EN0 RS422	Encoder 0-pulse 0-0 (TTL)	ENAR5422	Encoder A/Ā (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

