Fiber-Optic Cable Sensor

UF55MG3

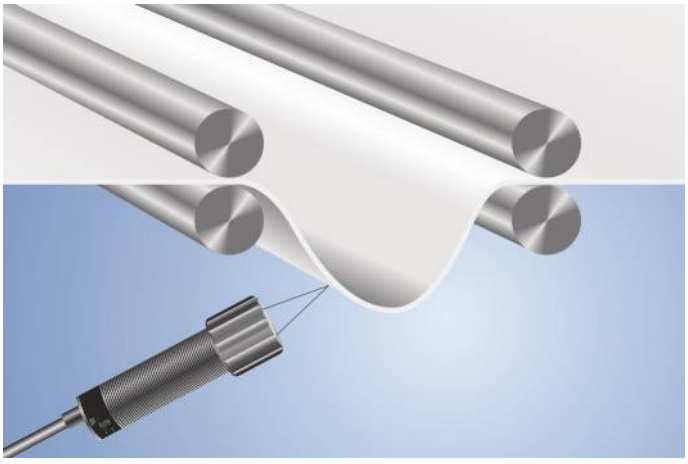
Part Number

- **Analog output (0...10 V DC)**
- **Linear output signal proportional to distance**
- **Usable with or without glass fiber-optic cable**

Technical Data

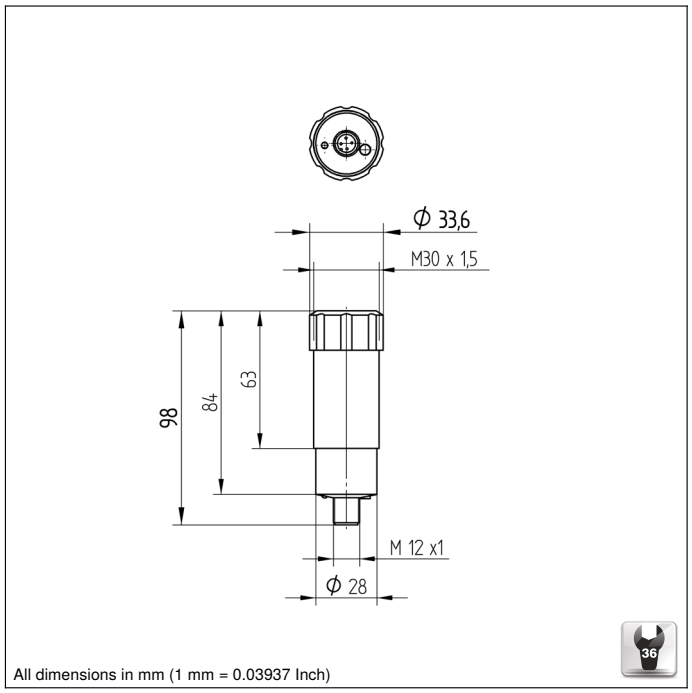
Optical Data	
Working Range	50...500 mm
Measuring Range	450 mm
Resolution	10 mm
Linearity	5 %
Light Source	Infrared Light
Wavelength	880 nm
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	12 °
Electrical Data	
Supply Voltage	20...30 V DC
Current Consumption (Ub = 24 V)	< 40 mA
Switching Frequency	50 Hz
Response Time	10 ms
Temperature Drift	1 mm/K
Temperature Range	-10...60 °C
Analog Output	0...10 V DC
Output Resistance Analog Output	1 kOhm
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III
Mechanical Data	
Setting Method	Potentiometer
Housing Material	CuZn, nickel-plated
Full Encapsulation	yes
Degree of Protection	IP65
Connection	M12 × 1; 4-pin
Analog Output	●
Connection Diagram No.	501
Control Panel No.	F7
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	130
Suitable Fiber-Optic Cable Adapter No.	01

This sensor is suitable for analog distance measurements and can be used with or without a glass fiber cable. The output voltage is dependent upon the brightness of the object to be measured, as bright objects reflect transmitted light better than dark objects.



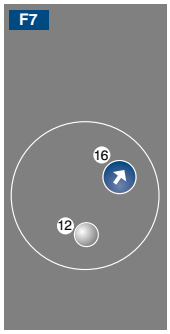
Complementary Products

Glass Fiber-Optic Cable

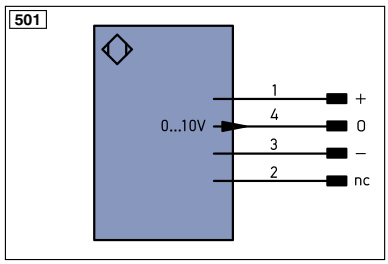


All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



12 = Analog Output Indicator
16 = Working Distance Adjustment



Legend

+	Supply Voltage +	PT	Platinum measuring resistor	$EN_{A\,RS422}$	Encoder A/Ā (TTL)
–	Supply Voltage 0 V	nc	not connected	$EN_{B\,RS422}$	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN_A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN_B	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A_{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	W–	Ground for the Trigger Input	A_{MAX}	Digital output MAX
V̄	Contamination/Error Output (NC)	O	Analog Output	A_{OK}	Digital output OK
E	Input (analog or digital)	O–	Ground for the Analog Output	SY In	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
Z	Time Delay (activation)	A_{NW}	Valve Output	O_{LT}	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance
RxD	Interface Receive Path	b	Valve Control Output 0 V	rsv	reserved
TxD	Interface Send Path	SY	Synchronization	Wire Colors according to DIN IEC 757	
RDY	Ready	SY–	Ground for the Synchronization	BK	Black
GND	Ground	E+	Receiver-Line	BN	Brown
CL	Clock	S+	Emitter-Line	RD	Red
E/A	Output/Input programmable	⏚	Grounding	OG	Orange
	IO-Link	SnR	Switching Distance Reduction	YE	Yellow
PoE	Power over Ethernet	Rx+/–	Ethernet Receive Path	GN	Green
IN	Safety Input	Tx+/–	Ethernet Send Path	BU	Blue
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
Signal	Signal Output	La	Emitted Light disengageable	GY	Grey
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
$EN_{0\,RS422}$	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contactor Monitoring	GNYE	Green/Yellow