Flow Sensor

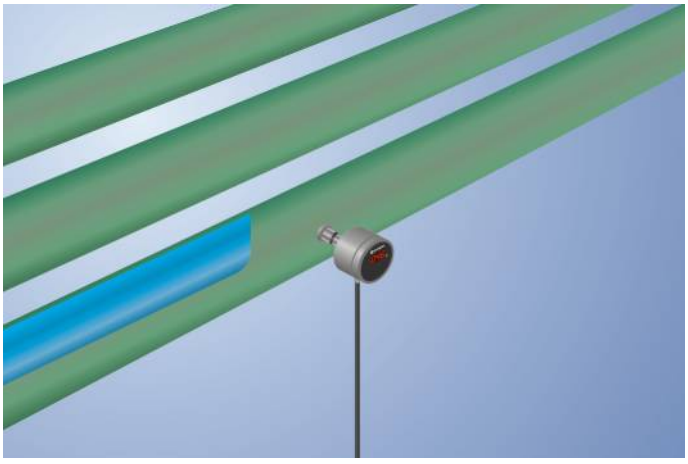
FFXF001

Part Number

InoxSens UniFlow

- **CIP-capable**
- **FDA compliant**
- **Highest precision of its class**
- **Hygienic design makes it easy to clean**
- **Measurement independent of flow direction**
- **Temperature of the medium: 0 ... 100° C (140° C for 24 hours without current measurement)**

wenglor UniFlow flow sensors measure the flow rate of aqueous and oily media in closed piping systems.
UniFlow flow sensors are very easy to operate thanks to the removable cover on the integrated display. The highly visible switching status display enables the rapid localization of affected sensors for maintenance processes.
Thanks to the metallic sealing edge on the process connection, no further seals are required.



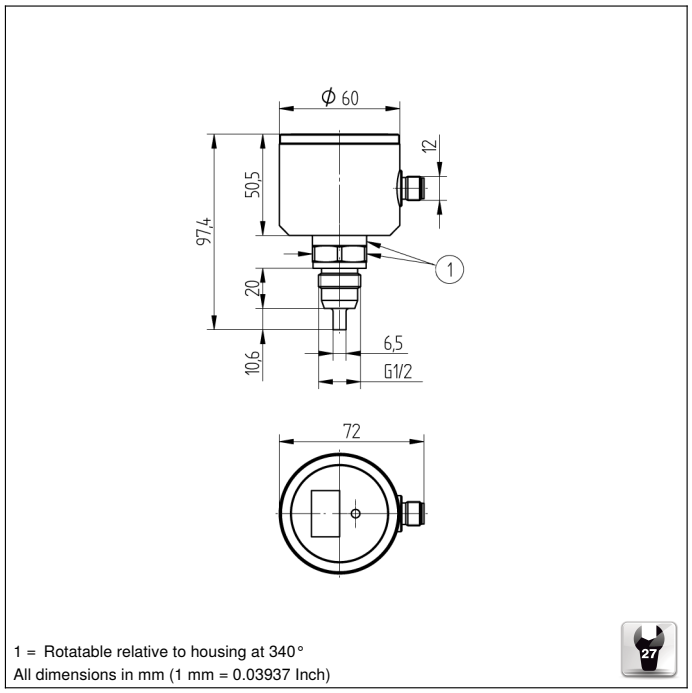
Technical Data

Sensor-specific data	
Selectable measuring range	10...300 cm/s
Measuring range 1	10...150 cm/s
Adjustable range 1	15...150 cm/s
Measuring range 2	20...300 cm/s
Adjustable range 2	30...300 cm/s
Medium	Water
Measuring error	2 %
Switching Hysteresis	5 %
Temperature gradient	30 K
Response time in case of temperature jump	10 s
Environmental conditions	
Temperature of medium	0...100 °C
Temperature of the medium, short-term	140 °C
Ambient temperature	-20...70 °C
Mechanical Strength	60 bar
EMC	DIN EN 60947-5-9
Shock resistance per DIN IEC 68-2-27	30 g / 11 ms
Vibration resistance per DIN IEC 60068-2-6	20 g (10...2000 Hz)
Electrical Data	
Supply Voltage	16...32 V DC
Current Consumption (Ub = 24 V)	60 mA
Switching Outputs	1
Analog Output	4...20 mA Flow
Response Time	1...5 s
Switching Output/Switching Current	< 250 mA
Switching Output Voltage Drop	< 2 V
Current Output Load Resistance	< 500 Ohm
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III
Mechanical Data	
Setting Method	Menu
Housing Material	1.4404; PC; EPDM
Material Control Panel	Polyester
Material in contact with media	1.4435; 1.4404
Degree of Protection	IP67/IP69K *
Connection	M12 × 1; 4-pin
Process Connection	G 1/2" CIP-capable
Process Connection Length (PCL)	48 mm
Probe Length (PL)	10 mm
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1194,55 a
Diagnostic Coverage (DC)	0 %
Service Life TM (EN ISO 13849-1)	20 a
Analog output flow	●
PNP NO/NC switchable	●
Connection Diagram No.	533
Control Panel No.	A12
Suitable Connection Technology No.	21
Suitable Mounting Technology No.	906

* Tested by wenglor

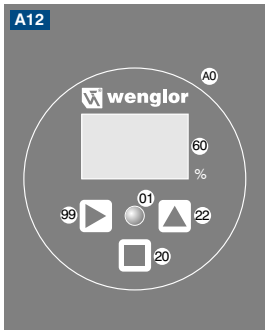
Complementary Products

Software

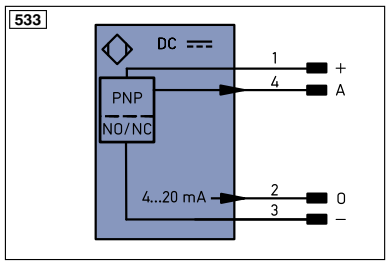


1 = Rotatable relative to housing at 340°
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



01 = Switching Status Indicator
0A = Detachable lid
20 = Enter Button
22 = UP Button
60 = Display
99 = Right button



Legend

+	Supply Voltage +
–	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
V̄	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)
EN0 RS422	Encoder 0-pulse 0-0̄ (TTL)
PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
O	Analog Output
O–	Ground for the Analog Output
BZ	Block Discharge
AMV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
E+	Receiver-Line
S+	Emitter-Line
⏚	Grounding
SnR	Switching Distance Reduction
Rx+/–	Ethernet Receive Path
Tx+/–	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(–)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring
ENA RS422	Encoder A/Ā (TTL)
ENB RS422	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
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
GNYE	Green/Yellow