

## Description

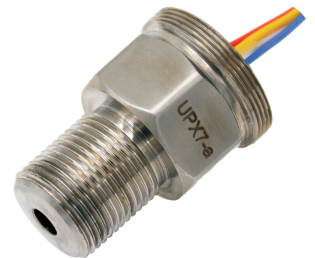
Based on metal foil strain gauge technology, the sensing elements of UPX-7 series pressure sensors are strain gauges, these strain gauges form a Wheatstone bridge on back of the diaphragm to sensing the deformation of the diaphragm, this deformation results from the pressure which act vertically to the diaphragm.

UPX7-a strain gauge pressure sensor is made with inner cavity, for pressure range less than 400bar, the sensor adopts welding sealing method, for 400bar~600bar, it is designed with integrated structure.

UPX7-b strain gauge pressure sensor is made with flush diaphragm. Its performance and principle are similar to UPX7-a. UPX7-b uses unique sealing method between the diaphragm and the connector, so as to ensure the sealing realibility, and also ensure the diaphragm performance. This sensor is widely used in food, medicine and beverage industries.



**UPX7-b flush diaphragm**



**UPX7-a cavity type**

## Features

- High accuracy, high performance
- Suitable for middle and high pressure measurement
- Isolated structure, suitable for many kinds of pressure medium
- Anti-corrosive, anti-attrition, anti-impact
- Pressure port has cavity type and flush diaphragm

## Electrical connection

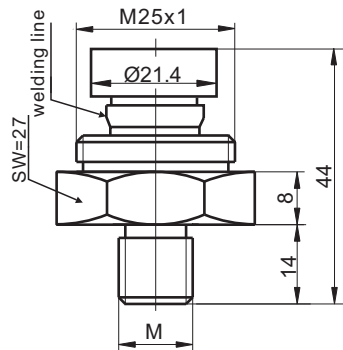
<u>connection</u>	<u>cable color</u>
excitation“+”	red
excitation“-”	blue
signal“+”	yellow
signal“-”	white

**4 colored silicon rubber flexible wire**

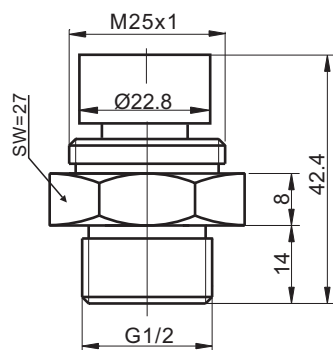
## Specifications

pressure medium	gas or liquid compatible to stainless steel
pressure ranges	0~40bar...6000bar
overload pressure	150%FS
output signal	~1.5mV/V
accuracy	0.25%FS(standard), 0.5%FS
zero unbalance	<±2%FS
long-term stability	<0.2%FS/year
suggested excitation voltage	6VDC~12VDC
max. excitation voltage	5VDC~18VDC
compensated temperature range	-10~+60℃
operating temperature range	-20~+70℃
temperature coefficient of zero	0.2%FS/10℃
temperature coefficient of span	0.2%FS/10℃
input resistance	380±5Ω, 1000±5Ω
output resistance	350±5Ω, 1000±5Ω
insulation resistance	100MΩ@50VDC
process connection	G1/2 or others
electrical connection	4colored PVC flexible wire
material of pressure membrane	17-4PH
material of housing	1Cr18Ni9Ti/17-4PH

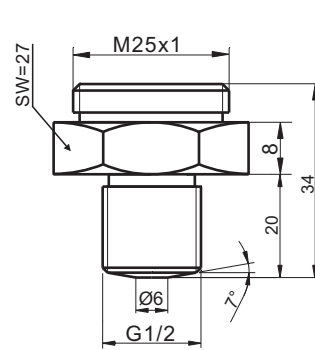
## Dimensions



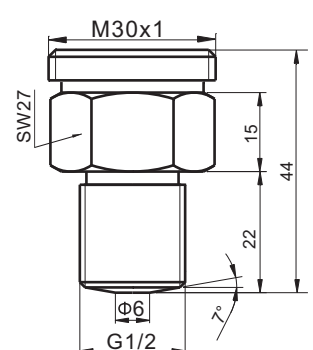
UPX7-a (4~40MPa)



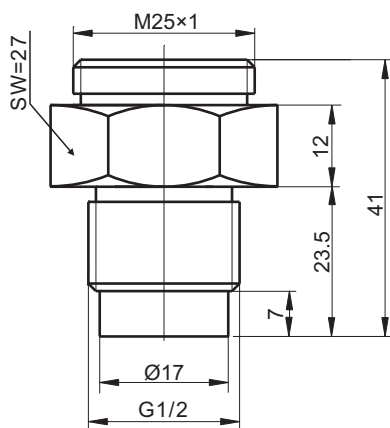
UPX7-a(40~70MPa)



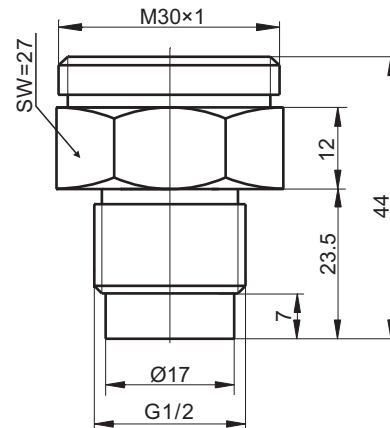
UPX7-a(80~250MPa)



UPX7-a(300~600MPa)



UPX7-b(40~100MPa)



UPX7-b(100~150MPa)



# UPX7 Series Strain gauge Pressure Sensor

## Ordering code

UPX7-a cavity type				
UPX7-b flush diaphragm				
		range	measuring range: 0~40bar...6000bar	
		(0~X)bar	X: actual measuring range	
			code	process connection
		P1	G1/4	
		P2	G1/2	
		P4	M20×1.5	
		Pz	customer request	
UPX7-a	(0~100)bar	P2		

Note: UTOP can make these sensors according to customer required dimensions