TK3051P高温防腐型压力变送器

TK3051P High Temperature Anti-Corrosion Pressure Transmitter

一、产品简介

该型号是TK3051T型标准智能压力变送器的变形产品，在TK3051T的基础上加装密封隔离膜结构。过程连接方式为 螺纹旋入式，平型法兰式．延伸凸型法兰式及焊接螺纹式。 法兰式隔离膜片可用多种合金材料和塑料涂层合金制作。加 装温度隔离器或毛细管，可耐300℃介质。极大扩展了应用 范围、适用于高温．强腐蚀和粘度大介质的测量，除温度影 响指标与TK3051T型有所不同外，其它性能基本一致。

Product introduction

This model is the variant of TK3051T standard intelligent pressure transmitter, which has seal isolation diaphragm structure added on TK3051T. The process connection type is thread screw-in type, flat flange type, extended convex flange and welded thread type. The flange type isolation diaphragm can be made of multiple kinds of alloy material and plastic coated alloy. With temperature isolator or capillary, it is able to withstand 300℃ medium. It expands greatly the application range and suitable for measurement of medium with high temperature, strong corrosion and large viscosity. Its performance is basically the same as TK3051T type except the temperature influence index.

二、测量范围

相对压力

最大测量范围0~40MPa；最小测量范围0~4kPa。

绝对压力

最大测量范围0~4MPa；最小测量范围0~50kPa。

负相对压力

最大测量范围-0.1MPa~39.9MPa；
最小测量范围-50kPa~0kPa。

Measurement range

Relative pressure

Maximum measurement range 0~40MPa
Minimum measurement range 0~4kPa

Absolute pressure

Maximum measurement range 0~4MPa
Minimum measurement range 0~50kPa

Relative pressure

Maximum measurement rang -0.1MPa~39.9MPa
Minimum measurement range -50kPa~0kPa

TK3051P高温防腐型连接件数据

Data of TK3051P high temperature anti-corrosion connection parts

选型代码 Selection code	连接螺纹						密封隔离膜片				
	公称直径 G	公称压力 PN	直径 d1 mm	直径 d mm	直径 d2 mm	螺纹长度X1 mm	外侧平面间距 SW mm	膜片直径 dm mm	推荐最小测量值 mm	高度 A mm	总质量 kg
AF	GI/A	40MPa	29	39	sw41	21	41	27	1	175	1.6
AG	G1I/2A	40MPa	42	54.5	58	30	41	38	0.04	177	2.3
AR	G2A	40MPa	56	68	78	30	60	44	0.01	182	3.3

隔膜材料

过程连接件螺纹部分不锈钢1 Cr 18Ni9Ti；
特殊要求可供不锈钢316L，哈氏合金C276；
波纹膜片不锈钢316L；
哈氏合金C276。

温度影响

隔离膜片G1A +1200Pa/10K；
隔离膜片G11/2A +600Pa/10K；
隔离膜片 G2A +300Pa/10K。

过程连接1

外螺纹旋入式焊接密封隔膜结构连接；
螺纹标准G1A.G11/2A、G2A PN40MPa。
（特殊要求可供NPT标准）

Diaphragm material

Partial stainless steel for threads of process connection parts .
Stainless steel 316L, Hastelloy C276 can be provided for special requirements.
Corrugated diaphragm stainless steel 316L.
Hastelloy C276.

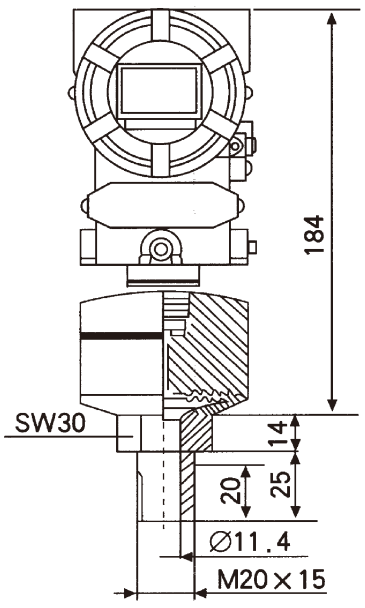
Temperature influence

Isolation diaphragm G1A +1200Pa/10K
Isolation diaphragm G11/2A +600Pa/10K
Isolation diaphragm G2A +300Pa/10K

Process connection 1

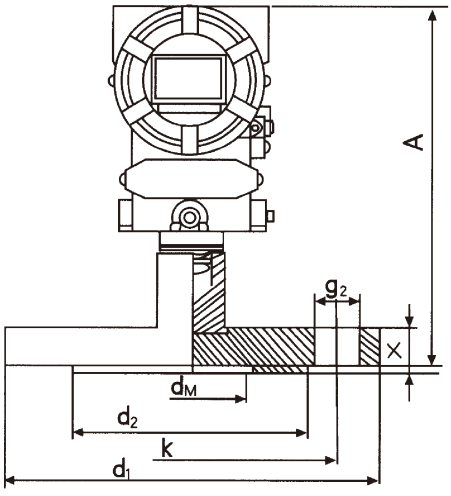
External thread screw-in welded seal diaphragm structure connection.
Thread standard G1A.G11/2A, G2A PN40MPa.
（NPT standards can be provided for special requirements）

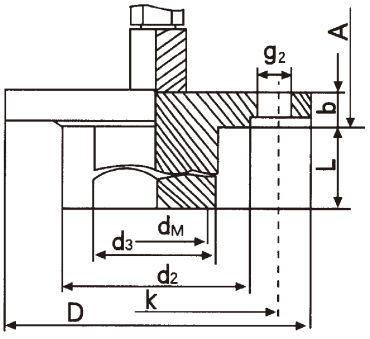
外型结构1
Outer structure 1



图中数据
Date in the drawing
详见“过程”连接(一)栏
See column connection (I) of “process”

外型结构2
Outer structure 2





过程连接2

平法兰或延伸平法兰式焊接密封隔膜结构连接。
法兰标准 GB9123-88。
TK3051P高温防腐型DN50、DN80、PN1/4MPa、DN25、DN50、PN6/40MPa。
（结构见上图数据见下表）
（特殊要求可供DIN、ANSI标准）

Process connection2

Flat flange or extended flat flange type welded seal diaphragm structure connection.
Flange standard GB9123-88.
TK3051P high temperature anti-corrosion DN50,DN80, PN1/4MPa,DN25,DN50,PN6/40MPa.
(See the drawing above for structure and see the following table for data.)
(Standards DIN and ANSI can be provided for special requirements)

TK3051P高温防腐型连接件数据
Data of TK3051P high temperature anti-corrosion connection parts

选型代码 Selection code				DK	AK	BK	CK	SU	NU	NU	PU
法兰 Flange	公称直径 Nominal diameter	DN	/	50	50	50	50	80	80	80	80
	公称压力 Nominal pressure	PN	MPa	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
	压径（D） Pressure diameter	d1	mm	165	165	165	165	200	200	200	200
	厚度（X） Thickness	b	mm	20	20	20	20	24	24	24	24
	延伸膜长度 Length of extended film	I	mm	/	50	100	200	/	50	100	200
	延伸膜直度 Straightness of extended film	d3	mm	/	48.3	48.3	48.3	/	76.5	76.5	76.5
	凸台直径 Diameter of boss	I	mm	99	99	99	99	132	132	132	132
螺孔 Thread	孔数 Number of holes	/	/	4	4	4	4	4	4	4	4
	孔径 Hole diameter	g2	mm	18	18	18	18	18	18	18	18
	孔中心距 Center distance of holes	K	mm	125	125	125	125	160	160	160	160
密封隔离膜片 Sealing isolation diaphragm	膜片直径 Diaphragm diameter	dm	mm	46	46	46	46	70	70	70	70
	高度 Height	A	mm	200	204	204	204	204	204	204	204
	总重量 Total weight	/	kg	3.72	4.48	8.11	3.72	6.23	6.23	4.48	4.48

3051P型连接件数
Number of 3051P type connection parts

SU	NU	NU	PU
25	25	25	25
5/10	15/25	5/15	15/25
125	150	165	215
17.5	20	20	20
/	/	/	/
/	/	/	/
50.8	50.8	92.1	92.1
4	4	8	8
20	26	20	26
89	101.5	127	165
28	28	46	46
204	204	204	204
2.9	5.45	11.4	16.9

外形结构2

过程连接件：
平法兰，延伸平法兰部分，不锈钢，
1Cr18Ni9Ti（特殊要求可供不锈钢316L）。

温度影响2

DN25：2kPa/10K；
DN50：300Pa/10K；
DN50（包括延伸50mm、100mm、200mm）：300Pa/10K；
DN80（包括延伸50mm、100mm、200mm）：200Pa/10K。

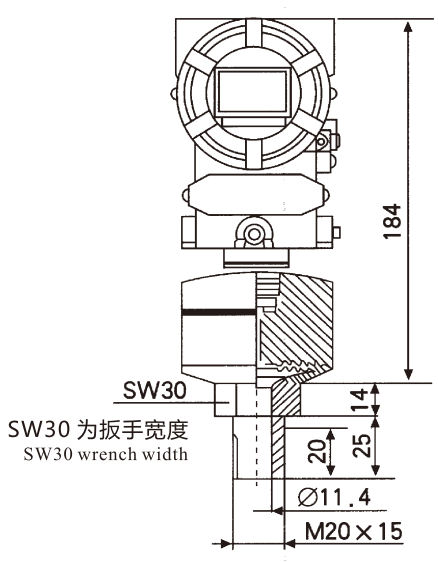
Outer structure 2

Process connection parts:
Flat flange, extended flat flange part, stainless steel
1Cr18Ni9Ti(Stainless steel316L can be provided for special requirements)

Humidity influence 2

Process connection parts:
Flat flange, extended flat flange part, stainless steel
1Cr18Ni9Ti(Stainless steel316L can be provided for special requirements)

外型结构3
Outer structure 3



过程连接3

焊接式外螺纹焊接密封隔膜结构连接。
螺纹标准：外螺纹G1/2A内孔φ11.4mm。
PN4MPa（特殊要求可供NPT标准）。

隔膜材料3

过程连接件焊接螺纹部分：不锈钢。
1Cr18Ni9Ti（特殊要求可供不锈钢316L、哈氏合金C-276）。
隔离波纹膜片部分：不锈钢316L、哈氏合金C 276、 钽、不锈钢316L带PTFE涂层。
隔离波纹膜片部分： 不锈钢316L哈氏合金C276、钽及不锈钢316带PTFE涂层。

温度影响3

200Pa/10K。

Process connection2

Welded external thread welded seal diaphragm structure connection.
Thread standard: external thread G1/2A inner hole φ11.4mm.
PN4MPa (NPT standard can be provided for special requirements)

Diaphragm material 3

Welded thread part of process connection parts: stainless steel 1Cr18Ni9Ti(Stainless steel 316L and hastelloy C-276 can be provided for special requirements)
Isolation corrugated diaphragm part: stainless steel 316L, hastelloy C 276, tantalum, stainless steel 316L with PTFE coating

Temperature influence 3

200Pa/10K.

TK3051P高温防腐型压力变送器

TK3051P High Temperature Anti-Corrosion Pressure Transmitter

型号 Model	变送器型号 Transmitter type	
R	标准型 Standard type	
G	本安型iaⅡCT4/T6 Intrinsic safety type iaIICT4/T6	
I	隔爆型dII CT4/T6 Explosion suppression type dII CT4/T6	
代号 Code	**外壳、显示 Shell, display**	
3	铝外壳，电缆孔 M20×1.5 M20×1.5带数字显示器 Luminum shell, cable hole, M20×1.5 M20×1.5 with digital display	
4	铝外壳，电缆孔M20×1.5 Aluminum shell, cable hole, M20×1.5	
9	约定的特殊要求 Stipulated special requirements	
代号 Code	**传感器标准量程（量程比10:1） Standard range of sensor(Range rate 10:1)**	**最大过压 Maximum overpressure**
	表压传感器 Gauge pressure sensor	
1F	传感器40kPa Sensor 40kPa	1MPa
1K	传感器200kPa Sensor 200kPa	2MPa
1P	传感器1MPa Sensor 1MPa	4MPa
1S	传感器4MPa Sensor 4MPa	6MPa
1G	传感器7MPa Sensor 7MPa	10MPa
1L	传感器10MPa Sensor10MPa	15MPa
1X	传感器20MPa Sensor20MPa	30MPa
1H	传感器40MPa Sensor40MPa	60MPa
	绝压传感器 Gauge pressure sensor	
2F	传感器40kPa Sensor 40kPa	1MPa
2K	传感器200kPa Sensor 200kPa	2MPa
2P	传感器1MPa Sensor 1MPa	4MPa
2S	传感器4MPa Sensor 4MPa	6MPa
代号 Code	**标定、压力单位 Calibration, pressure unit**	
2	0~标准量程，标定kPa/MPa 0~standard range, calibration kPa/MPa	
9	约定的特殊要求 Stipulated special requirements	
代号 Code	**电子部件、通讯协议 Electronic part, communication protocol**	
H	输出4~20mA，HART协议Output 4~20mA, HART protocol	
S	输出4~20mA Output 4~20mA	
Y	约定的特殊要求 Stipulated special requirements	
代号 Code	**隔膜中介液 Diaphragm medium liquid**	
A	硅油 Silicon oil	
G	高温油+温度隔离器 High temperature oil + temperature isolator 100mm	
K	高温油，1m毛细管 High temperature oil, 1m capillary	
L	硅油，1m毛细管 High temperature oil, 1m capillary	
Y	约定的特殊要求 Stipulated special requirements	
代号 Code	**过程连接标准 Process connection standards**	
AF	外螺纹G1A，推荐最小测量值 200KPa Outer thread G1A, recommended minimum measurement value 200KPa	
AG	外螺纹G11/2A，推荐最小测量值40KPa Outer thread G11/2A, recommended minimum measurement value 40KPa	
AR	外螺纹G2A，推荐最小测量值10KPa Outer thread G2A, recommended minimum measurement value 10KPa	
CA	焊接螺纹外螺纹G1/2A内孔φ11.4mm Welded thread outer thread G1/2A inner hole φ11.4mm	
DK	平法兰GB9123-88 DN50，PNlMPa/4MPa Flat flange GB9123-88 DN50, PNlMPa/4MPa	
SU	平法兰GB9123-88 DN80，PNlMPa/4MPa Flat flangeGB9123-88 DN80, PNlMPa/4MPa	
AK	平法兰GB9123-88 DN50，PNlMPa/4MPa，延伸50mm Flat flange GB9123-88 DN50, PNlMPa/4MPa, extend 50mm	
BK	平法兰GB9123-88 DN50，PNlMPa/4MPa，延伸100mm Flat flange GB9123-88 DN50, PNlMPa/4MPa, extend 100mm	
OK	平法兰GB9123-88 DN50，PNlMPa/4MPa，延伸200mm Flat flange GB9123-88 DN50, PNlMPa/4MPa, extend 200mm	
MU	平法兰GB9123-88 DN50，PNlMPa/4MPa，延伸50mm Flat flange GB9123-88 DN50, PNlMPa/4MPa, extend 50mm	
NU	平法兰GB9123-88 DN80，PNlMPa/4MPa，延伸100mm Flat flange GB9123-88 DN80, PNlMPa/4MPa, extend 100mm	
PU	平法兰GB9123-88 DN80，PNlMPa/4MPa，延伸200mm Flat flange GB9123-88 DN80, PNlMPa/4MPa, extend 200mm	
YY	约定的特殊要求 Stipulated special requirements	
代号 Code	**波纹膜片材料 Corrugated diaphragm material**	
1	不锈钢316L Stainless steel 316L	
2	哈氏合金C276 Hastelloy C276	
5	钽 Tantalum	
7	不锈钢316L带PTFE涂层 Stainless steel 316L with PTFE painting	
9	约定的特殊要求 Stipulated special requirements	

TK3051P- R 3 1F 2 H A DK 1

安装附件
安装支架 .....G
标准电缆密封套
外螺纹M20×1.5 .....T
隔爆电缆密封套
外螺纹M20×1.5.....T2
用户选用附件，请在选型代码后的括号内注明所要附件的代码。

Installation accessories
Installation frame.....G
Standard cable seal cartridge
External screw M20×1.5 .....T
Explosion suppression cable seal cartridge
External screw M20×1.5.....T2
When the user chooses accessory, please indicate the code of the required accessory in the bracket after the selection code.