

INDUSTRIAL PRESSURE TRANSMITTER

Overview

The TPS series pressure transmitter has extremely robust structure and stable sensor with sputtering thin-film-on-steel technology, as a result, they have proven themselves in a multitude of demanding applications in harsh environment. Superior precise manufacturing ensure the transmitters work perfectly, especially in areas where high requirements are placed on long-term stability, vibration resistance, electromagnetic compatibility, shock resistance or temperature insensitivity, measuring range from 0 ~ 5bar... 2,500bar [100...to 36,000psi].



Applications

- Hydraulics
- Injection molding machines
- Machine building and automation
- Process technology
- Water and wastewater
- Elevator technology
- Railways
- Shipbuilding
- New energy

Features



- Excellent long-term stability
- Thin-film-on-steel sensor technology
- Completely welded steel sensor system without additional seals
- Superior anti-interference, vibration resistance, electromagnetic compatibility, shock resistance and advanced insulation film material resistant to very high over pressures
- Wide temperature adaptability
- Response time $\leq 1\text{ms}$
- Protection IP67
- Various electrical connections
- Low cost, adapt needs of customers to develop OEM solutions

Technical Data

Measuring principle	Thin-film-on-steel	Accuracy	$\pm 0.5\% \text{ FS}$ ($\pm 0.25\% \text{ FS}$ Optional)
Measuring range	0 ~ 5bar... 2,500bar	Long term stability	$\leq 0.1\% \text{ FS/year}$
Output signal	4 ... 20mA 0 ... 10VDC 0 ... 5VDC 0.5 ... 4.5VDC 1 ... 6VDC CANopen	EMC protection	Emission (IEC 61000-6-3) Immunity (IEC 61000-6-2)
Rise time	$\leq 1\text{ms}$	Vibration	20g, 20Hz ~ 2000H (IEC60068-2-6)
Insulation resistance	$\geq 500\text{M}\Omega/500\text{VDC}$	Shock	100g, 6ms (IEC60068-2-27)
Pressure connection	Page 2 of 4	Durability	10^7 times
Sensor	17-4PH	Media temperature	$-40^\circ\text{C} \dots +125^\circ\text{C}$
Over pressure	Page 2 of 4	Protection	IP67
Burst pressure	Page 2 of 4	Electrical connection	Page 3 & 4

Rev.B

05/2023

Ordering information

Example: TPS.02.42.G14M.52.25MPA

TPS

02

42

G14M

52

25MPA

Type code TPS Pressure Transmitter

Mechanical structure

02

SW22

02

Output signal

42

4 ... 20 mA

42

05

0 ... 5 VDC

16

1 ... 6 VDC

10

0 ... 10 VDC

45

0.5 ... 4.5 VDC

46

CANopen

Pressure connection

G14F

G1/4 female

G14M

G1/4 male

G14M

NPT14F

1/4NPT female

NPT14M

1/4NPT male

G12M

G1/2 male

NPT12M

1/2NPT male

UNF716

7/16-20UNF female

Electrical connection

51

Delphi Packard Metri Pack (3pin)

52

Hirschmann EN 175301-803-A (DIN 43650-A)

52

53

Hirschmann EN175301-803-C (DIN 43650-C)

54

Deutsch DT04 (3pin)

55

Deutsch DT04 (4pin)

56

Deutsch DTM04 (3pin)

57

M12x1 (4pin) Plastic

58

M12x1 (4pin) Metal

59

AMP Superseal (3pin)

60

Shielded cable with PVC jacket and 24 AWG leads

range

Measurement Range

Over pressure

Burst pressure

Measurement Range

Over pressure

Burst pressure

0...0.5 MPa

3 X Range

20 X Range

0...60 MPa

2 X Range

5 X Range

0...1.0 MPa

3 X Range

20 X Range

0...70 MPa

1.5 X Range

5 X Range

0...1.6 MPa

3 X Range

15 X Range

0...100 MPa

1.5 X Range

≤400 MPa

0...2.5 MPa

3 X Range

15 X Range

0...120 MPa

1.5 X Range

≤400 MPa

0...4 MPa

2 X Range

10 X Range

0...140 MPa

1.5 X Range

≤400 MPa

0...6 MPa

2 X Range

10 X Range

0...160 MPa

1.5 X Range

≤400 MPa

0...10 MPa

2 X Range

10 X Range

0...180 MPa

1.5 X Range

≤400 MPa

0...16 MPa

2 X Range

5 X Range

0...200 MPa

1.5 X Range

≤400 MPa

0...25 MPa

2 X Range

5 X Range

0...250 MPa

≤300MPa

≤400 MPa

25MPA

0...40 MPa

2 X Range

5 X Range

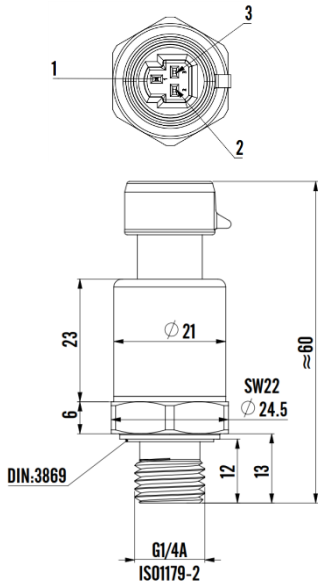
1) Additional request. Contact Factory

Dimension & Electrical Connection

unit: mm weight: ≈53~68g

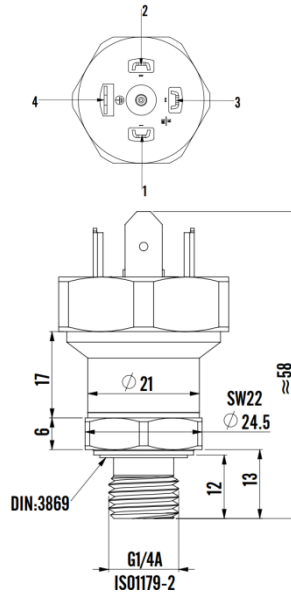
Packard接口

PIN#	电压输出	电流输出
1	V-Common	V-
2	V+	V+
3	Output	NC



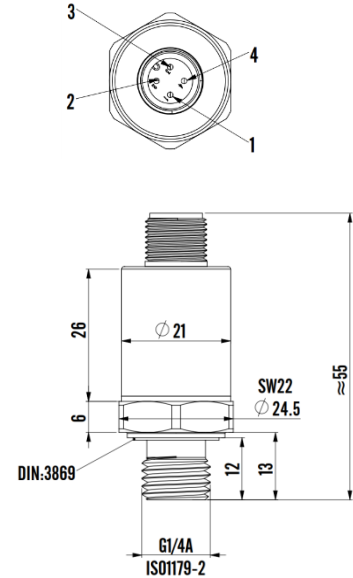
赫斯曼接口 (EN17530-803 Form A)

PIN#	电压输出	电流输出
1	V+	V+
2	V-Common	V-
3	Output	NC
4	Ground	NC



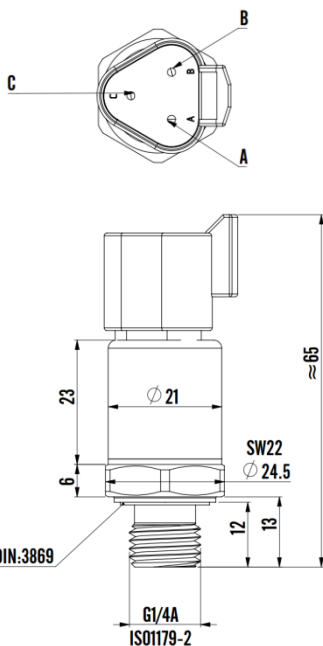
M12x1 金属接口

PIN#	电压输出	电流输出
1	V+	V+
2	Ground	NC
3	V-Common	V-
4	Output	NC



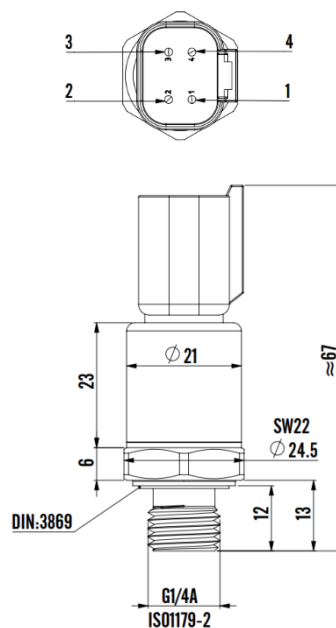
德驰接口 (Deutsch DT04-3P)

PIN#	电压输出	电流输出
A	V+	V+
B	V-Common	V-
C	Output	NC



德驰接口 (Deutsch DT04-4P)

PIN#	电压输出	电流输出
1	V-Common	V-
2	V+	V+
3	Ground	NC
4	Output	NC



AMP接口

PIN#	电压输出	电流输出
1	V+	V+
2	V-Common	V-
3	Output	NC

