



PRODUCT INFORMATION

SENSORS
INCORPORATED

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PET

Pressure sensor

SICK
Sensor Intelligence.

PET

Pressure sensors

If one is not enough



Product description

The pressure transmitter PET is a solution for OEM customers for use in plant engineering and machine building. With a wide range of available measuring ranges, process connections, output signals, and electrical connections, the PET is well suited for diverse applications, such as in hydraulics, for pumps and compressors, etc. Its compact dimensions enable integration in narrow spaces. During the

development of the PET, durability and a high level of product quality were of paramount importance. As such, the PET has a circularly welded stainless steel membrane and as a result, is well suited for a large variety of fluids.

The manufacturing capabilities are set up for large quantities and provide an optimized cost-value ratio also for individual solutions.

At a glance

- Measuring ranges from 0 bar ... 6 bar up to 0 bar ... 600 bar
- Various output signals and electrical connections available
- Common process connections available
- High overpressure safety. Pressure peak protection available upon request for selected process connections.
- Circularly welded, hermetically sealed stainless steel membrane
- Stainless steel housing with enclosure rating up to IP 67 (with round connector M12 x 1)

Your benefits

- A wide range of variants enables a perfect match to individual requirements
- Space-saving due to its compact size
- Time-saving due to quick and simple installation
- Manufacturing capabilities that are aligned to OEM demands ensure an excellent price-performance ratio for application-specific solutions
- Wetted parts are made from stainless steel for universal use even with a large variety of corrosive fluids



Additional information

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➔ www.mysick.com/en/PET
 For more information, just enter the link and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.

Detailed technical data

Features

Measuring ranges	
Gauge pressure	min. 0 bar ... 6 bar up to max. 0 bar ... 600 bar min. 0 psi ... 160 psi up to max. 0 psi ... 8.000 psi
Compound pressures	min. -1 bar ... 5 bar up to max. -1 bar ... 59 bar min. -30 inHg ... 100 psi up to max. -30 inHg ... 300 psi
Overload protection	2-fold (3-fold upon request)
Process temperature	-30 °C ... +100 °C
Output signals	
Current output signal	4 mA ... 20 mA, 2-wire
Voltage output signal	0 V ... 10 V, 3-wire 0 V ... 5 V, 3-wire 1 V ... 5 V, 3-wire 0.5 V ... 4.5 V, 3-wire
Ratiometric output signal	0.5 V ... 4.5 V, ratiometric, 3-wire

Performance

Non-linearity	≤ ± 0.5 % of span (best fit straight line, BFSL) ≤ ± 0.6 % of span (best fit straight line, BFSL) for measurement ranges 0 bar ... 6 bar, 0 bar ... 10 bar, -1 bar ... 5 bar, -1 bar ... +9 bar, and 0 psi ... 100 psi
Accuracy	≤ ± 1.2 % of span (at room temperature)
Response time	< 2 ms
Measurement deviation of zero signal	≤ ± 0.5 % of span ≤ ± 0.7 % of span for measurement ranges 0 bar ... 6 bar, 0 bar ... 10 bar, -1 bar ... 5 bar, -1 bar ... +9 bar, and 0 psi ... 100 psi
Temperature error	≤ ± 1.5 % of span
Long-term drift/one-year stability	≤ ± 0.3 % of span (per year)
Rated temperature range	0 °C ... +80 °C
Reference conditions	According to IEC 61298-1

Mechanics/electronics

Process connection	See type code
Seal	NBR ¹⁾ FPM/FKM ²⁾ Without sealing
Wetted parts	Stainless steel 316L, stainless steel 13-8 PH
Pressure port	3.5 mm Standard
Pressure peak dampening ³⁾	Through optional integrated pressure port 0.6 mm or 0.3 mm
Housing material	Stainless steel 316L, PBT GF30
Enclosure rating ⁴⁾	IP 67, for round connector (according to IEC 60529) IP 65, for Lconnector (according to IEC 60529)
Electrical connection	Round connector M12 x 1, 4-pin For Lconnector according to DIN EN 175301-803 A (without plug)
Supply voltage ⁵⁾	
4 mA ... 20 mA, 2-wire	8 V DC ... 30 V DC

¹⁾ Only for process connection G 1/4 A according to DIN 3852-E.

²⁾ Only for process connections G 1/4 A according to DIN 3852-E, 7/16" 20 UNF and 9/16" 18 UNF.

³⁾ Available upon request for process connections G 1/4 A according to DIN 3852-E, 1/4" NPT, R 1/4 according to ISO 7, and 7/16" 20 UNF.

⁴⁾ The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

⁵⁾ Electrical circuit in accordance with section 9.3 of UL/EN/IEC 61010-1 or an LPS to UL/EN/IEC 60950-1 or class 2 in accordance with UL1313/UL1585 (NEC or CEC). The power supply must be suitable for operation above 2,000 m should the pressure transmitter be used at this altitude.

	0 V ... 10 V, 3-wire 0 V ... 5 V, 3-wire 1 V ... 5 V, 3-wire 0.5 V ... 4.5 V, 3-wire 0.5 V ... 4.5 V, ratiometric, 3-wire	14 V DC ... 30 V DC 8 V DC ... 30 V DC 8 V DC ... 30 V DC 8 V DC ... 30 V DC 5 V DC ± 10 %
Maximum ohmic load R_A		≤ (L ⁺ - 7 V) / 0.02 A [Ohm] with current output signal > $Q_{A,max}$ / 1 mA [Ohm] with voltage output signal > 4.5 kΩ with ratiometric output signal
Maximum power consumption		
Current output signal		25 mA (signal current, maximum 25 mA)
Voltage output signal		5 mA
Ratiometric output signal		5 mA
Initialization time		15 ms
Protection class		III
Isolation voltage		750 V DC
Overvoltage protection		36 V DC
Short-circuit protection		Output Q_A towards M
Reverse polarity protection		L ⁺ towards M
CE-conformity		2004/108/EC, EN 61326-1 emission (group 1, class B) and interference immunity (industrial application) and pressure equipment directive 97/23/EC
RoHS certificate		✓
Service life		Minimum 10 Mio. life cycles

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Ambient data

Ambient temperature operation	-30 °C ... +100 °C
Storage temperature	-30 °C ... +100 °C
Shock load	40 g (6 ms) according to IEC 60068-2-27 (mechanical shock)
Vibration load	20 g (20 Hz ... 2000 Hz, 120 min) according to IEC 60068-2-6 (vibration at resonance)

Ordering information

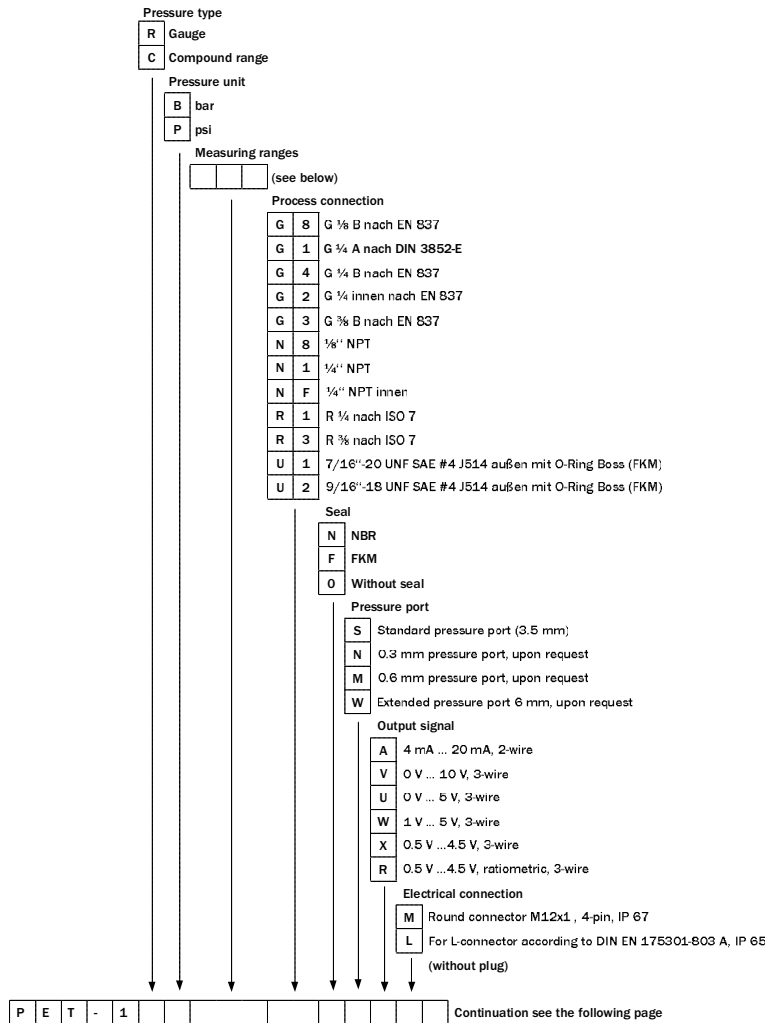
The part numbers below show a selection of our common configurations and represent only a portion of the product portfolio. The type code on page 5 indicates all possible configurations that can be ordered.

- **Electrical connection:** round connector M12 x 1, 4-pin

Process connection	Output signal	Seal	Measuring range	Type	Part no.
G 1/4 A according to DIN 3852-E	4 mA ... 20 mA, 2-wire	NBR	0 bar ... 10 bar	PET-1RB010G1NS-AMA	6049221
			0 bar ... 100 bar	PET-1RB100G1NS-AMA	6048928
			0 bar ... 250 bar	PET-1RB250G1NS-AMA	6049222

Type code

Type code



- Supply voltage**
 A Supply voltage 8 VDC ... 30 VDC
 C Supply voltage 14 VDC ... 30 VDC
 R Supply voltage 5 VDC ± 10 %



Note: Not all variations of the type code can be combined.

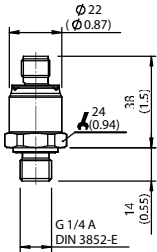
Measuring ranges:

bar / gauge pressure	bar / compound ranges
6X0 0 bar ... 6 bar	6X0 -1 bar ... +5 bar
010 0 bar ... 10 bar	010 -1 bar ... +9 bar
016 0 bar ... 16 bar	016 -1 bar ... +15 bar
025 0 bar ... 25 bar	025 -1 bar ... +24 bar
040 0 bar ... 40 bar	040 -1 bar ... +39 bar
060 0 bar ... 60 bar	060 -1 bar ... +59 bar
100 0 bar ... 100 bar	
160 0 bar ... 160 bar	
250 0 bar ... 250 bar	
400 0 bar ... 400 bar	
600 0 bar ... 600 bar	

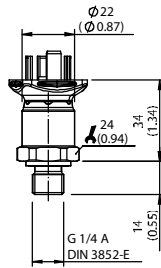
psi / gauge pressure	psi / compound ranges
100 0 psi ... 100 psi	115 -30 inHg ... +100 psi
160 0 psi ... 160 psi	175 -30 inHg ... +160 psi
200 0 psi ... 200 psi	215 -30 inHg ... +200 psi
250 0 psi ... 250 psi	315 -30 inHg ... +300 psi
300 0 psi ... 300 psi	
400 0 psi ... 400 psi	
500 0 psi ... 500 psi	
600 0 psi ... 600 psi	
750 0 psi ... 750 psi	
800 0 psi ... 800 psi	
1K0 0 psi ... 1000 psi	
1K5 0 psi ... 1500 psi	
2K0 0 psi ... 2000 psi	
3K0 0 psi ... 3000 psi	
4K0 0 psi ... 4000 psi	
5K0 0 psi ... 5000 psi	
6K0 0 psi ... 6000 psi	
7K5 0 psi ... 7500 psi	
8K0 0 psi ... 8000 psi	

Dimensional drawings

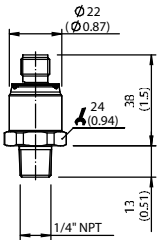
Process connection G 1/4 A according to DIN 3852-E with round connector M12 x 1, 4-pin



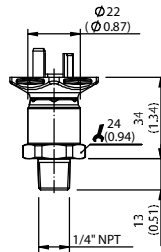
Process connection G 1/4 A according to DIN 3852-E with connection for L-connector according to DIN EN 175301-803 A



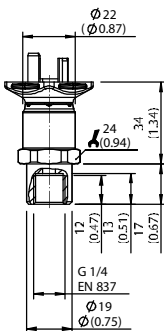
Process connection 1/4" NPT with round connector M12 x 1, 4-pin



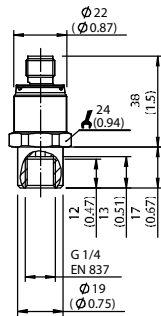
Process connection 1/4" NPT with connection for L-connector according to DIN EN 175301-803 A



Process connection G 1/4 female according to EN 837 with connection for L-connector according to DIN EN 175301-803 A

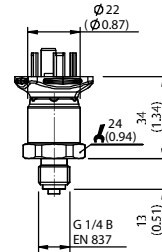


Process connection G 1/4 female according to EN 837 with round connector M12 x 1, 4-pin

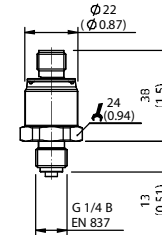


dimensions in mm (inch)

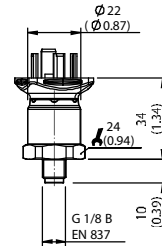
Process connection G 1/4 B according to EN 837 with connection for L-connector according to DIN EN 175301-803 A



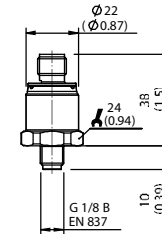
Process connection G 1/4 B according to EN 837 with round connector M12 x 1, 4-pin



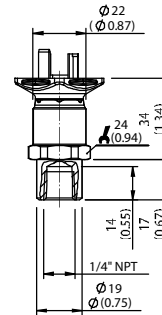
Process connection G 1/8 B according to EN 837 with connection for L-connector according to DIN EN 175301-803 A



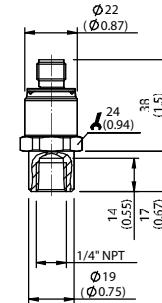
Process connection G 1/8 B according to EN 837 with round connector M12 x 1, 4-pin



Process connection 1/4" NPT female with connection for L-connector according to DIN EN 175301-803 A

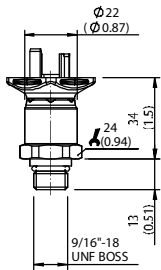


Process connection 1/4" NPT female with round connector M12 x 1, 4-pin

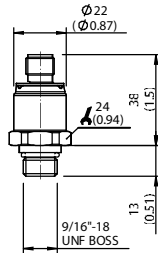


dimensions in mm (inch)

Process connection 9/16"-18 UNF SAE #4 J514 male with O-ring Boss (FKM) with connection for L-connector according to DIN EN 175301-803 A



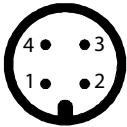
Process connection 9/16"-18 UNF SAE #4 J514 male with O-ring Boss (FKM) with round connector M12 x 1, 4-pin



dimensions in mm (inch)

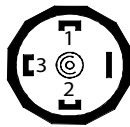
Electrical connection

Round connector M12 x 1, 4-pin



Assignment	L +	M	Q _A
2-wire	1	3	-
3-wire	1	3	4

Connection for L-connector according to DIN EN 175301-803 A



Assignment	L +	M	Q _A
2-wire	1	2	-
3-wire	1	2	3

L+/Q_A Positive power terminal / Analog output
M Negative power terminal

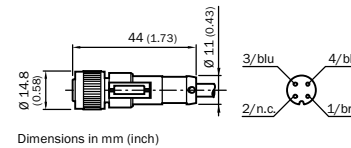
Accessories

- Accessory category: Plug connectors and cables
- Connector type: Female connector

	Flying leads	Enclosure rating	Sheath material	Cable length	Type	Part no.
		IP 67	PVC	2 m	DOL-1204-G02M	6009382
		IP 68	PUR halogen free	2 m	DOL-1204-G02MC	6025900
see no. 1	Straight	IP 67	PVC	5 m	DOL-1204-G05M	6009866
see no. 2		IP 68	PUR halogen free	5 m	DOL-1204-G05MC	6025901
see no. 1		IP 67	PVC	10 m	DOL-1204-G10M	6010543
see no. 2		IP 68	PUR halogen free	10 m	DOL-1204-G10MC	6025902
see no. 1		IP 67	PVC	15 m	DOL-1204-G15M	6010753
see no. 2		IP 68	PUR halogen free	15 m	DOL-1204-G15MC	6034749
see no. 1		IP 67	PVC	20 m	DOL-1204-G20M	6034401
see no. 2		IP 68	PUR halogen free	20 m	DOL-1204-G20MC	6034750
see no. 1		IP 67	PVC	25 m	DOL-1204-G25MC	6034751
see no. 2		IP 68	PUR halogen free	2 m	DOL-1204-W02M	6009383
see no. 1		IP 67	PVC	5 m	DOL-1204-W05M	6009867
see no. 2		IP 68	PUR halogen free	5 m	DOL-1204-W05MC	6025904
see no. 1		IP 67	PVC	10 m	DOL-1204-W10M	6010541
see no. 2		IP 68	PUR halogen free	10 m	DOL-1204-W10MC	6025905
see no. 1	IP 67	PVC	15 m	DOL-1204-W15M	6036474	
see no. 2	IP 68	PUR halogen free	15 m	DOL-1204-W15MC	6034752	
see no. 1	IP 67	PVC	20 m	DOL-1204-W20M	6033559	
see no. 2	IP 68	PUR halogen free	20 m	DOL-1204-W20MC	6034753	
see no. 2			25 m	DOL-1204-W25MC	6034754	

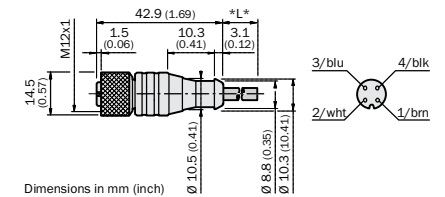
Dimensional drawings

DOL-1204-G02M, DOL-1204-G02MC, DOL-1204-G05M, DOL-1204-G05MC, DOL-1204-G10M, DOL-1204-G10MC, DOL-1204-G15M, DOL-1204-G15MC, DOL-1204-G20MC, DOL-1204-G25MC



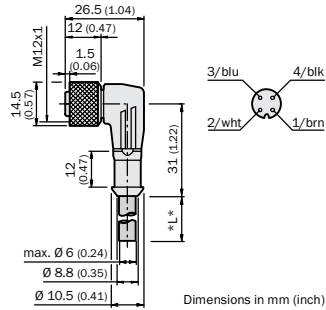
Dimensions in mm (inch)

DOL-1204-G20M

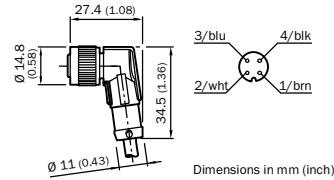


Dimensions in mm (inch)

DOL-1204-W02M, DOL-1204-W05M, DOL-1204-W10M, DOL-1204-W15M, DOL-1204-W20M

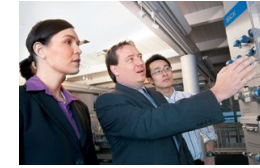
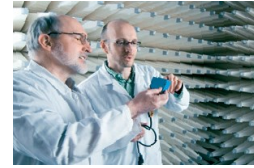


DOL-1204-W02MC, DOL-1204-W05MC, DOL-1204-W10MC, DOL-1204-W15MC, DOL-1204-W20MC, DOL-1204-W25MC



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SICK at a glance



Leading technologies

With a staff of more than 5,000 and over 50 subsidiaries and representations worldwide, SICK is one of the leading and most successful manufacturers of sensor technology. The power of innovation and solution competency have made SICK the global market leader. No matter what the project and industry may be, talking with an expert from SICK will provide you with an ideal basis for your plans – there is no need to settle for anything less than the best.

Unique product range

- Non-contact detecting, counting, classifying, positioning and measuring of any type of object or media
- Accident and operator protection with sensors, safety software and services
- Automatic identification with bar code and RFID readers
- Laser measurement technology for detecting the volume, position and contour of people and objects
- Complete system solutions for analysis and flow measurement of gases and liquids

Comprehensive services

- SICK LifeTime Services – for safety and productivity
- Application centers in Europe, Asia and North America for the development of system solutions under real-world conditions
- E-Business Partner Portal www.mysick.com – price and availability of products, requests for quotation and online orders

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- Canada
- China
- Danmark
- Deutschland
- España
- France
- Great Britain
- India
- Israel
- Italia
- Japan

- México
- Nederland
- Norge
- Österreich
- Polska
- România
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