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PRODUCT INFORMATION



PET

Pressure sensor

SICK
Sensor Intelligence.

If one is not enough



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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

→ 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
	Ratiometric output signal	0.5 V ... 4.5 V, 3-wire
		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 L-connector (according to IEC 60529)
Electrical connection	Round connector M12 x 1, 4-pin For L-connector according to DIN EN 175301-803 A (without plug)
Supply voltage ⁵⁾	8 V DC ... 30 V DC
4 mA ... 20 mA, 2-wire	

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 UL1310/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	14 V DC ... 30 V DC
0 V ... 5 V, 3-wire	8 V DC ... 30 V DC
1 V ... 5 V, 3-wire	8 V DC ... 30 V DC
0.5 V ... 4.5 V, 3-wire	8 V DC ... 30 V DC
0.5 V ... 4.5 V, ratiometric, 3-wire	5 V DC \pm 10 %
Maximum ohmic load R_A	$\leq (L^+ - 7 \text{ V}) / 0.02 \text{ A}$ [Ohm] with current output signal $> Q_{A, \text{max}} / 1 \text{ mA}$ [Ohm] with voltage output signal $> 4.5 \text{ k}\Omega$ 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

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.

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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

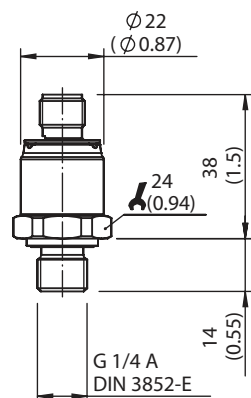
Process connection	Output signal	Seal	Measuring range	Type	Part no.
G 1/4 A according to DIN 3852-E	4 mA ... 20 mA, 2-wire	NBR	0 bar ... 10 bar	PET-1RB010G1NS-AMA	6049221
			0 bar ... 100 bar	PET-1RB100G1NS-AMA	6048928
			0 bar ... 250 bar	PET-1RB250G1NS-AMA	6049222



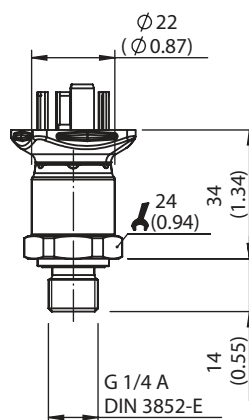
Note: Not all variations of the type code can be combined.

Dimensional drawings

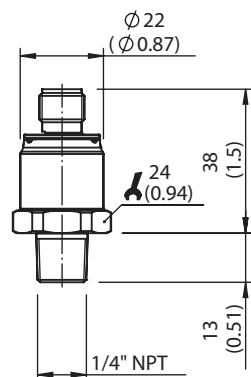
Process connection G 1/4 A according to DIN 3852-E with round connector M12 x 1, 4-pin



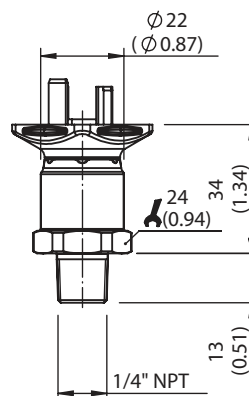
Process connection G 1/4 A according to DIN 3852-E with connection for L-connector according to DIN EN 175301-803 A



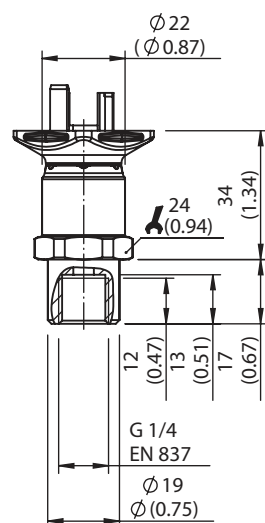
Process connection 1/4" NPT with round connector M12 x 1, 4-pin



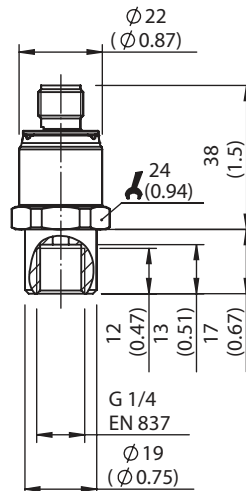
Process connection 1/4" NPT with connection for L-connector according to DIN EN 175301-803 A



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

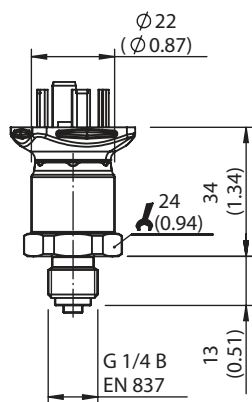


Process connection G 1/4 female according to EN 837 with round connector M12 x 1, 4-pin

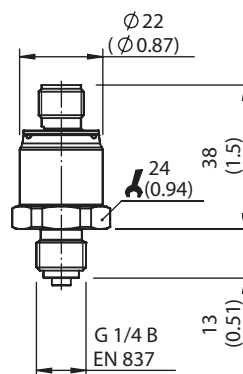


dimensions in mm (inch)

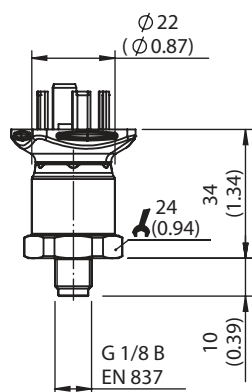
Process connection G 1/4 B according to EN 837 with connection for L-connector according to DIN EN 175301-803 A



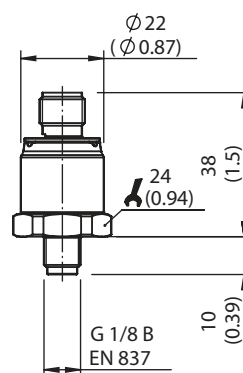
Process connection G 1/4 B according to EN 837 with round connector M12 x 1, 4-pin



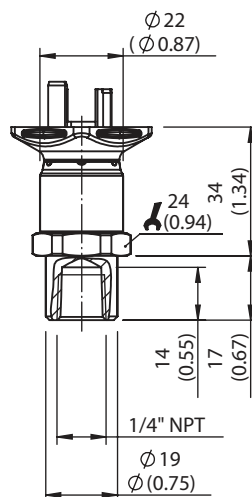
Process connection G 1/8 B according to EN 837 with connection for L-connector according to DIN EN 175301-803 A



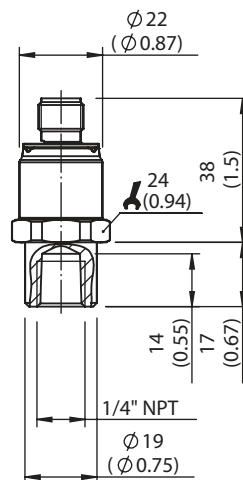
Process connection G 1/8 B according to EN 837 with round connector M12 x 1, 4-pin



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

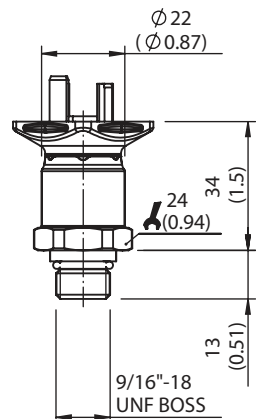


Process connection 1/4" NPT female with round connector M12 x 1, 4-pin

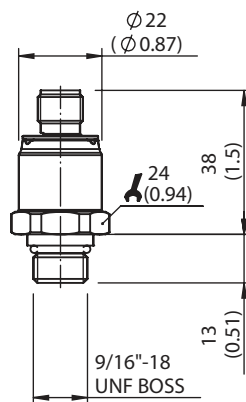


dimensions in mm (inch)

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



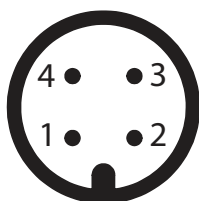
Process connection 9/16"-18 UNF SAE #4 J514 male with O-ring Boss (FKM) with round connector M12 x 1, 4-pin



dimensions in mm (inch)

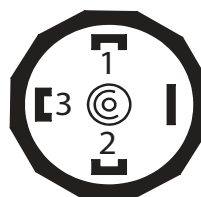
Electrical connection

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

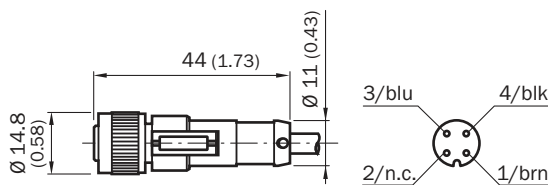
Accessories

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

	Flying leads	Enclosure rating	Sheath material	Cable length	Type	Part no.
	Straight	IP 67	PVC	2 m	DOL-1204-G02M	6009382
		IP 68	PUR halogen free	2 m	DOL-1204-G02MC	6025900
see no. 1		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
				25 m	DOL-1204-G25MC	6034751
see no. 1	Angled	IP 67	PVC	2 m	DOL-1204-W02M	6009383
see no. 2		IP 68	PUR halogen free	2 m	DOL-1204-W02MC	6025903
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
				25 m	DOL-1204-W25MC	6034754

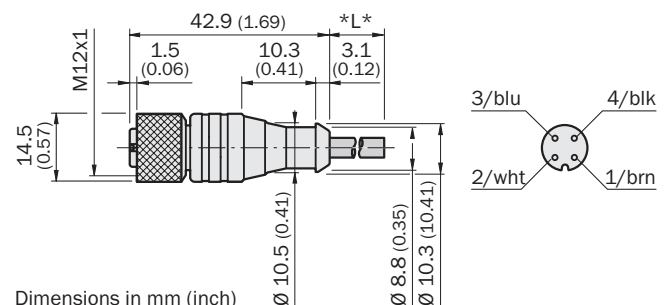
Dimensional drawings

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

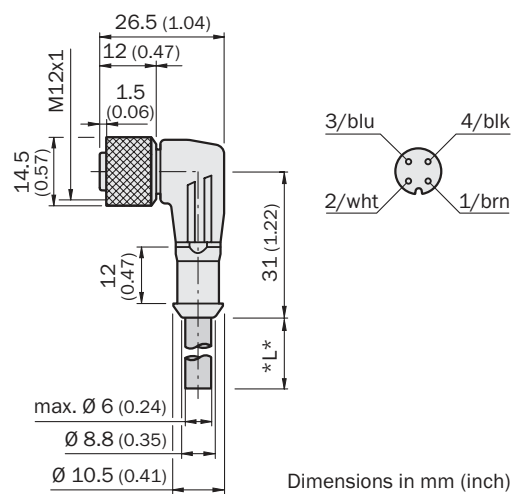
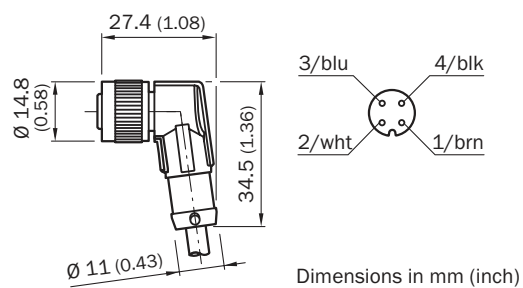


Dimensions in mm (inch)

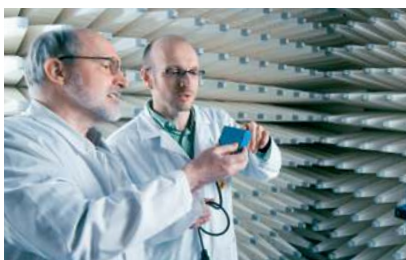
DOL-1204-G20M



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


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
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- 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



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