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DATA SHEET

PHT-RB2X5ST20S0AFT0Z

PHT
Pressure sensors

SICK Sensor Intelligence



Illustration may differ

PRESSURE SENSORS

PHT-RB2X5ST20S0AFT0Z

ORDERING INFORMATION

Type	part no.
PHT-RB2X5ST20S0AFT0Z	6081090

Further device versions and accessories at www.sick.com/PHT

DETAILED TECHNICAL DATA

FEATURES

Medium	Liquid, gaseous
Pressure type	Gauge pressure
Pressure unit	bar
Measuring range	0 bar ... 2.5 bar
Process temperature	–20 °C ... +150 °C
Maximum ohmic load R_A	4 mA ... 20 mA, 2-wire ($R_A \leq (L^+ - 10\ V) / 0.02\ A$ [Ohm]) , The variant with field housing and current output 4 mA ... 20 mA features test terminals that allow metering of the signal current without having to disconnect the device.the signal current without having to disconnect the device., 0 V ... 10 V, 3-wire (R_A > 10 kOhm), 0 V ... 5 V, 3-wire (R_A > 5 kOhm)
Output signal	4 mA ... 20 mA, 2-wire

MECHANICS/ELECTRONICS

Communication interface	-
Process connection	Tri-Clamp 2" (DIN 32676)
Wetted parts	Process connection: 316L stainless steel
Internal transmission fluid	Synthetic oil, FDA approved
Housing material	Stainless steel 1.4571
Connection type	Field housing
Supply voltage	11 V DC ... 30 V DC
Electrical safety	Overvoltage protection: 36 V DC Short-circuit protection: Q_A towards M Reverse polarity protection: L^+ to M Protection class: III
Dielectric strength	500 V DC, NEC Class 02 power supply (low voltage and low current max. 100 VA even in the event of a fault)
CE-conformity	EMC directive: 2004/108/EC, EN 61326-2-3

[1] Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

Weight sensor	Approx. 500 g
Seal	Without seal
Enclosure rating	IP67 [1]
Protection class III	✓
MTTF	403 years

[1] Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

PERFORMANCE

Non-linearity	≤ ± 0.2 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2
Accuracy	≤ ± 0.5 %, of the span (optional 0.25 % of span (adjusted in vertical mounting position with lower pressure connection))
Non-repeatability	≤ ± 0.1 % of the span
Response time (10 % ... 90 %)	≤ 10 ms
Long-term drift/one-year stability	≤ 0.2 % of the span
Temperature coefficient in rated temperature range	Mean TC of zero: ≤ 0.2% of span / 10 K for measuring ranges 0 bar ... 0.6 bar up to 0 bar ... 25 bar Mean TC of zero: ≤ 0.25 % of span/ 10 K with pressure range 0 bar ... 0.4 bar≤ 0.25 % of span/ 10 K, with pressure range 0 bar ... 0.4 bar Mean TC of zero: ≤ 0.4% of span / 10 K for measuring range 0 bar ... 0.25 bar Mean TC of span ≤ 0.2 % of span / 10 K
Rated temperature range	0 °C ... +80 °C

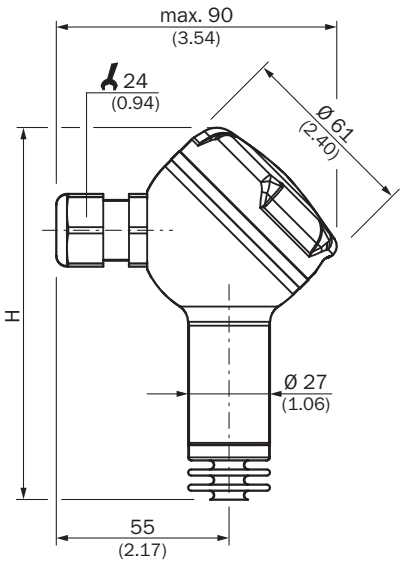
AMBIENT DATA

Ambient temperature, operation	–20 °C ... +80 °C
Storage temperature	–40 °C ... +100 °C
Shock load	500 g according to IEC 60068-2-27 (mechanical shock)
Vibration load	15 g according to IEC 60068-2-6 (vibration under resonance)

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
Food contact material manufacturer declaration	✓

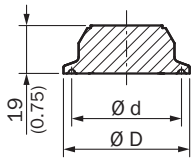
DIMENSIONAL DRAWING STAINLESS STEEL FIELD CASE, COMPRESSION FITTING COPPER ALLOY, NICKEL PLATED, IP67



With accuracy	H
0.5 %	123 (4.84)
0.25 %	138.5 (5.45)

Dimensions in mm (inch)

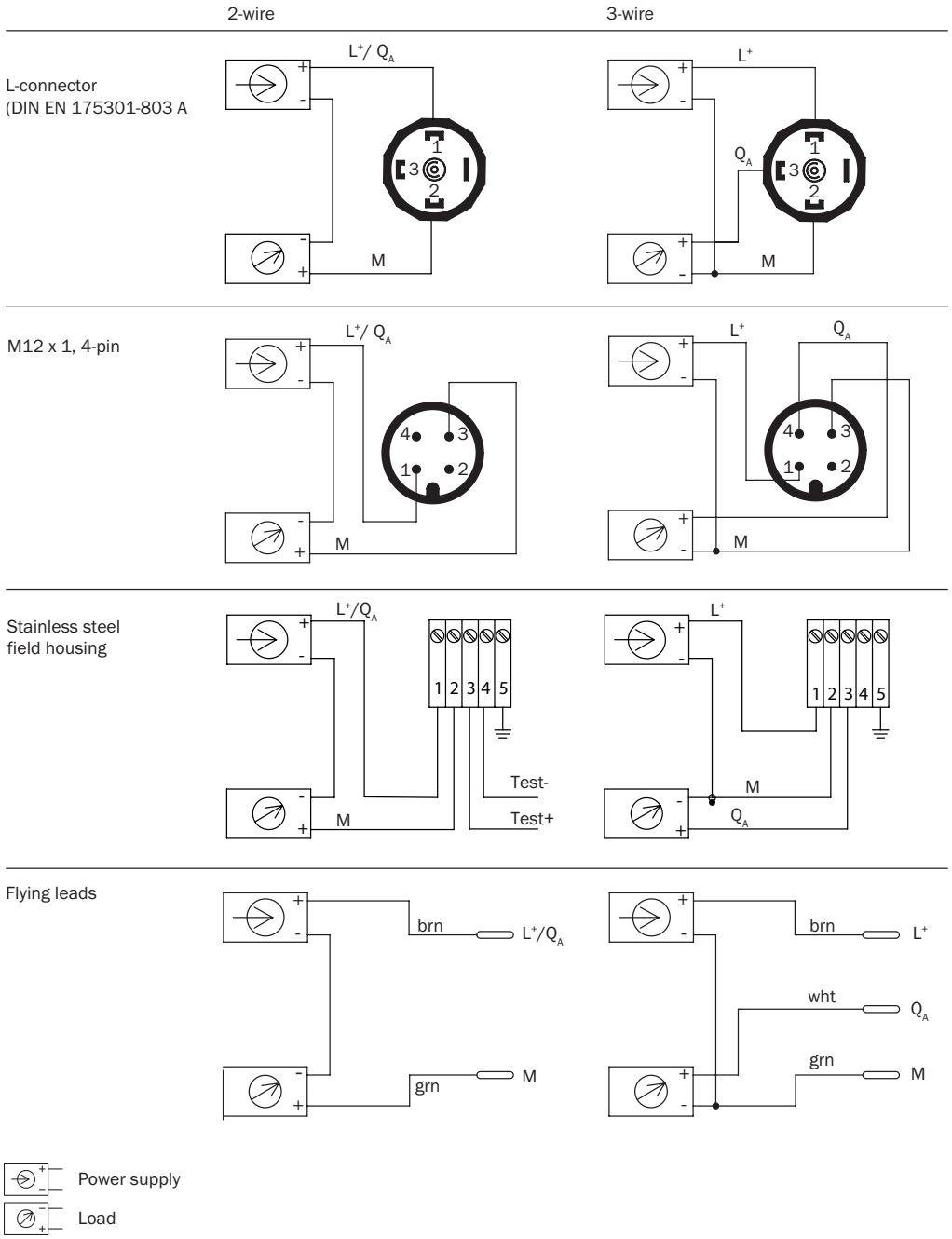
DIMENSIONAL DRAWING CLAMP



Design		Ø D	Ø d
Tri-Clamp	1 ½"	50 (1.97)	43.5 (1.71)
	2"	64 (2.52)	56.6 (2.23)
DIN 32676	DN 32	50 (1.97)	43.5 (1.71)
	DN 40	50 (1.97)	43.5 (1.71)
	DN 50	64 (2.52)	56.6 (2.23)
ISO 2852	DN 33.7	50 (1.97)	43.5 (1.71)
	DN 38	50 (1.97)	43.5 (1.71)
	DN 40	64 (2.52)	56.6 (2.23)
	DN 51	64 (2.52)	56.6 (2.23)

Dimensions in mm (inch)

CONNECTION TYPE



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6081090

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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