

## PBS-RP5K0SN1SS0AMA0Z PBS



**PRESSURE SENSORS** 

#### PBS-RP5K0SN1SS0AMA0Z | PBS

PRESSURE SENSORS



#### Ordering information

Туре	Part no.
PBS-RP5K0SN1SS0AMA0Z	6048120

Other models and accessories → www.sick.com/PBS

Illustration may differ



#### Detailed technical data

#### Features

Medium	Liquid, gaseous
Pressure type	Gauge pressure
Measuring range	0 psi 5,000 psi
Process temperature	-20 °C +85 °C
Zero point adjustment	Max. + 3 % of span
Output signal	2 x PNP
Rotatable housing	
Display	
Performance	
Non-linearity	$\leq$ $\pm$ 0.5 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2
Accuracy	$\leq$ ± 1 % of the span Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement as per IEC 61298-2)
Setting accuracy of switching outputs	$\leq$ ± 0.5 % of span
Response time	3 ms
Long-term drift/one-year stability	$\leq$ 0.2 % of the span according to IEC 61298-2

**Temperature coefficient in rated tempera**- Mean TC of zero point:  $\leq 0.2\%$  of span / 10 K, Mean TC of span  $\leq 0.2\%$  of span / 10 K

Rated temperature range	0 °C +80 °C
Service life	Minimum 100 Mio. life cycles

#### Mechanics/electronics

ture range

Process connection	1⁄4" NPT
Wetted parts	Pressure connection: stainless steel 316L Pressure sensor: stainless steel 316L (for measurement ranges from 0 bar 10 bar rel stain- less steel 13-8 PH)
Internal transmission fluid	Silicone oil (only with pressure ranges < 0 bar 10 bar and $\leq$ 0 bar abs 25 bar abs)
Pressure port	Standard

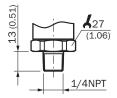
### PBS-RP5K0SN1SS0AMA0Z | PBS

PRESSURE SENSORS

Electrical connection Round connector M12 x 1, 4-pin, IP 67   Supply voltage Automatic consumption   Power consumption Max. 350 mA / 570 mA (incl. switching current)   Electrical safety S00 V DC		
Supply voltagePower consumptionTotal current consumptionMax. 350 mA / 570 mA (incl. switching current)Electrical safetyInsolation voltage500 V DCGE-conformityPressure equipment directive: This instrument is a pressure accessory as defined by the resure opportunity of pressure accessory as defined by the resure spressure accesso	Housing material	Lower body: stainless steel 304, Plastic head: PC + ABS, Buttons: TPE-E, Display window: PC
Power consumption     Max. 350 mA / 570 mA (incl. switching current)       Electrical safety     500 V DC       Deconformity     500 V DC       Deconformity     Pressure equipment directive: This instrument is a pressure accessory as defined by the active interver this instrument is a pressure accessory as defined by the active interver this pressure accessory as defined by the active interver this pressure accessory as defined by the active interver this pressure accessory as defined by the active interver this pressure accessory as defined by the active interver the active interver the active interver the active interver active interver accessory as defined by the active interver active	Electrical connection	Round connector M12 x 1, 4-pin, IP 67
Total current consumptionMax. 350 mA / 570 mA (incl. switching current)Electrical safetyinsolation voltage500 V DCCE-conformityPressure equipment directive: This instrument is a pressure accessory as defined by the etities 97/23/EC, EMC directive: 2004/108/EC, EN 61326-2-3Weight sensorApprox. 200 gSealWithout sealEnclosure ratingIP 67Protection class IIIIP 67Ambient data-20 °C+80 °CAmbient temperature-20 °C+80 °CStorage temperature-20 °C+80 °CRelative humiditys90 %Shock load-20 °C+80 °CVibration load-21731814Ecless 5.027371814Ecless 5.1.427371814Ecless 6.227371814Ecless 6.227371814Ecless 6.327371814Ecless 8.127371814Ecless 9.027371814Ecless 9.027371814Ecless 9.027371814Ecless 9.027371814Ecless 9	Supply voltage	
Flectical safety     Sol V DC       CE-conformity     Pressure equipment directive: This instrument is a pressure accessory as defined by the tive 97/23/EC, EMC directive: 2004/108/EC, EN 61326-2-3       Weight sensor     Approx. 200 g       Seal     Without seal       Enclosure rating     IP 67       Protection class III     -       Ambient data     -       Ambient temperature     -20 ° C +80 ° C       Storage temperature     -20 ° C +80 ° C       Relative humidity     <90 %       Shock load     -       Vibration load     -       Ecless 5.0     27371814       Ecless 6.2     27371814       Ecless 6.2     27371814       Ecless 8.0     27371814       Ecless 8.1     27371814       Ecless 9.0     27371814       Ecless 9.0     27371814       Ecless 9.0     27371814	Power consumption	
Insolation voltage500 V DCGE-conformityPressure equipment directive: This instrument is a pressure accessory as defined by the vive 97/23/EC, EMC directive: 2004/108/EC, EN 61326-23Weight sensorApprox. 200 gSealWithout sealEnclosure ratingIP 67Protection class III✓Ambient data-20 ° C +80 ° CStorage temperature-20 ° C +80 ° CClassifications-20 ° C +80 ° CClassifications-20 ° C +80 ° CEferes 5.027371814Eferes 6.027371814Eferes 6.127371814Eferes 6.227371814Eferes 8.027371814Eferes 8.127371814Eferes 8.127371814Eferes 9.027371814Efferes 9.027371814Efferes 9.027371814Efferes 9.027371814Efferes 9.027371814Efferes 9.027371814Efferes 9.027371814Efferes 9.027371814Efferes 9.027371814<	Total current consumption	Max. 350 mA / 570 mA (incl. switching current)
CE-conformity   Pressure equipment directive: This instrument is a pressure accessory as defined by the tive 97/23/EC, EMC directive: 2004/108/EC, EN 61326-2-3     Weight sensor   Approx. 200 g     Seal   Without seal     Enclosure rating   IP 67     Protection class III   ✓     Ambient data   ✓     Ambient temperature   -20 °C +80 °C     Storage temperature   -20 °C +80 °C     Stock load   -20 °C +80 °C     Yubration load   ≤ 90 %     Stock load   -20 °C +80 °C     Yubration load   ≤ 90 %     Classifications   ≤ 100 °C     ECl@ss 5.0   27371814     ECl@ss 6.0   27371814     ECl@ss 6.2   27371814     ECl@ss 6.2   27371814     ECl@ss 8.0   27371814     ECl@ss 8.1   27371814     ECl@ss 8.1   27371814     ECl@ss 8.1   27371814     ECl@ss 9.0   27371814     ECl@ss 9.0   27371814     ECl@ss 9.0   27371814     ECl@ss 9.0   27371814	Electrical safety	
tive 97/23/EC, EMC directive: 2004/108/EC, EN 61326-2-3Weight sensorApprox. 200 gSealWithout sealEnclosure ratingIP 67Protection class IIIIP 67Ambient dataIP 00°CAmbient temperature-20°C+80°CStorage temperature-20°C+80°CRelative humidity90 %Shock load-20°C+80°CVibration load20°C+80°CECless 5.027371814ECless 5.1.427371814ECless 6.027371814ECless 6.127371814ECless 6.227371814ECless 8.027371814ECless 8.127371814ECless 9.027371814ECless 9.027371814	Insolation voltage	500 V DC
SealWithout sealEnclosure ratingIP 67Protection class IIIIP 67Protection class IIIIAmbient dataIAmbient data-20 °C +80 °CStorage temperature-20 °C +80 °CStorage temperature-20 °C +80 °CShock loadSo %Vibration loadIClassificationsIEcloss 5.027371814Ecloss 6.027371814Ecloss 6.227371814Ecloss 6.227371814Ecloss 8.127371814Ecloss 9.027371814Ecloss 9.027371814	CE-conformity	Pressure equipment directive: This instrument is a pressure accessory as defined by the directive 97/23/EC, EMC directive: 2004/108/EC, EN 61326-2-3
Enclosure rating     IP 67       Protection class III     ✓       Ambient data     ✓       Ambient temperature     -20 °C +80 °C       Storage temperature     -20 °C +80 °C       Relative humidity     >90%       Shock load     ✓       Vibration load        ECless 5.0     27371814       ECless 5.1.4     27371814       ECless 6.0     27371814       ECless 6.1     27371814       ECless 6.2     27371814       ECless 8.0     27371814       ECless 8.1     27371814       ECless 8.1     27371814       ECless 9.0     27371814	Weight sensor	Approx. 200 g
Protection class III✓Ambient dataAmbient temperature-20 °C +80 °CStorage temperature-20 °C +80 °CRelative humidityShock loadVibration loadVibration loadEcless 5.027371814Ecless 6.027371814Ecless 6.027371814Ecless 7.027371814Ecless 8.027371814Ecless 8.027371814Ecless 8.127371814Ecless 8.027371814Ecless 8.127371814Ecless 9.027371814Ecless 9.027371814<	Seal	Without seal
Ambient dataAmbient temperature-20 °C +80 °CStorage temperature-20 °C +80 °CRelative humidity50 %Shock load50 %Vibration load-Vibration load-Ecless 5.027371814Ecless 5.1.427371814Ecless 6.027371814Ecless 6.027371814Ecless 7.027371814Ecless 8.027371814Ecless 8.027371814Ecless 8.127371814Ecless 8.127371814Ecless 8.127371814Ecless 8.127371814Ecless 8.127371814Ecless 8.127371814Ecless 9.027371814Ecless 9.027371814 </th <th>Enclosure rating</th> <th>IP 67</th>	Enclosure rating	IP 67
Ambient temperature-20 °C +80 °CStorage temperature-20 °C +80 °CColore-20 °C +80 °CRelative humidity< 90 %	Protection class III	✓
Storage temperature-20 °C +80 °CRelative humidity-20 °C +80 °CRelative humidity-90 %Shock load-90 %Vibration load-70 °C +80 °CClassifications-70 °C +80 °CECless 5.0273 71814ECless 6.0273 71814ECless 6.2273 71814ECless 6.2273 71814ECless 6.3273 71814ECless 8.0273 71814ECless 8.1273 71814ECless 8.1273 71814ECless 8.1273 71814ECless 9.0273 71814ETIM 5.0Cool243	Ambient data	
Relative humidity   ≤ 90 %     Shock load      Vibration load      Classifications      ECless 5.0   27371814     ECless 6.0   27371814     ECless 6.2   27371814     ECless 6.2   27371814     ECless 6.2   27371814     ECless 6.2   27371814     ECless 7.0   27371814     ECless 8.1   27371814     ECless 8.1   27371814     ECless 8.1   27371814     ECless 8.1   27371814     ECless 9.0   27371814     ECless 9.0   27371814     ECless 9.0   27371814	Ambient temperature	-20 °C +80 °C
Shock loadShock loadVibration loadClassificationsEcless 5.0Ecless 5.1.4Ecless 6.0Ecless 6.0Ecless 6.2Ecless 7.0Ecless 8.0Ecless 8.1Ecless 9.0Ecless 9.0Ecless 9.0Etless 9.0Etl	Storage temperature	-20 °C +80 °C
Vibration loadImage: Comparison of the section of the se	Relative humidity	≤ 90 %
Classifications     27371814       ECl@ss 5.0     27371814       ECl@ss 6.14     27371814       ECl@ss 6.0     27371814       ECl@ss 6.2     27371814       ECl@ss 7.0     27371814       ECl@ss 8.0     27371814       ECl@ss 8.1     27371814       ECl@ss 8.1     27371814       ECl@ss 9.0     27371814       ECl@ss 9.0     27371814       ECl@ss 9.0     27371814       ETIM 5.0     ECO00243	Shock load	
ECI@ss 5.0   27371814     ECI@ss 5.1.4   27371814     ECI@ss 6.0   27371814     ECI@ss 6.2   27371814     ECI@ss 7.0   27371814     ECI@ss 8.0   27371814     ECI@ss 8.1   27371814     ECI@ss 9.0   27371814	Vibration load	
ECI@ss 5.1.4   27371814     ECI@ss 6.0   27371814     ECI@ss 6.2   27371814     ECI@ss 7.0   27371814     ECI@ss 8.0   27371814     ECI@ss 8.1   27371814     ECI@ss 9.0   27371814	Classifications	
ECI@ss 6.0   27371814     ECI@ss 6.2   27371814     ECI@ss 7.0   27371814     ECI@ss 8.0   27371814     ECI@ss 8.1   27371814     ECI@ss 9.0   27371814     ECI@ss 9.0   27371814     ETIM 5.0   ECI00243	ECI@ss 5.0	27371814
ECI@ss 6.2   27371814     ECI@ss 7.0   27371814     ECI@ss 8.0   27371814     ECI@ss 8.1   27371814     ECI@ss 9.0   27371814     ETIM 5.0   ECO00243	ECI@ss 5.1.4	27371814
ECI@ss 7.0   27371814     ECI@ss 8.0   27371814     ECI@ss 8.1   27371814     ECI@ss 9.0   27371814     ECI@ss 9.0   27371814     ETIM 5.0   ECOO243	ECl@ss 6.0	27371814
ECI@ss 8.0   27371814     ECI@ss 8.1   27371814     ECI@ss 9.0   27371814     ETIM 5.0   ECO0243	ECI@ss 6.2	27371814
ECI@ss 8.1 27371814   ECI@ss 9.0 27371814   ETIM 5.0 ECO00243	ECI@ss 7.0	27371814
ECI@ss 9.0     27371814       ETIM 5.0     EC000243		
ETIM 5.0 EC000243		
ETIM 6.0 EC000243		
UNSPSC 16.0901 41112409	UNSPSC 16.0901	41112409

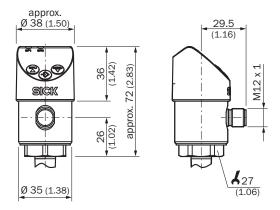
#### Dimensional drawing (Dimensions in mm (inch))

1⁄4" NPT



#### PBS-RP5K0SN1SS0AMA0Z | PBS

PRESSURE SENSORS



#### Connection type

M12 x 1, 4-pin 2 switching outputs/ 1 switching output + 1 analog output



M12 x 1, 5-pin 2 switching outputs + 1 analog output

- (1)  $L^+$ : Positive supply connection
- ② M: Negative supply connection
- $\bigcirc$  Q<sub>1</sub>: Switching output 1
- O C/Q<sub>1</sub>: With IO-Link: Communication/ switching output 1
- $\bigcirc$  Q<sub>2</sub>: Switching output 2
- 6 Q<sub>A</sub>: Analog output

#### Recommended accessories

Other models and accessories -> www.sick.com/PBS

	Brief description	Туре	Part no.
Mounting brac	ckets and mounting plates		
Fa	Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon, Aluminum	BEF-FL-ALUPBS-HLDR	5322501
Plug connectors and cables			
-	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-1204-G02M	6009382
	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 2 m	DOL-1204-G02MC	6025900
-	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 5 m	DOL-1204-G05M	6009866

# PBS-RP5KOSN1SSOAMAOZ | PBS PRESSURE SENSORS

	Brief description	Туре	Part no.
	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 5 m	DOL-1204-G05MC	6025901
	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 10 m	DOL-1204-G10M	6010543
	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 10 m	DOL-1204-G10MC	6025902
	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 15 m	DOL-1204-G15M	6010753
	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 20 m	DOL-1204-G20M	6034401
>	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 2 m	DOL-1204-W02M	6009383
~	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 2 m	DOL-1204-W02MC	6025903
	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 5 m	DOL-1204-W05M	6009867
~	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 5 m	DOL-1204-W05MC	6025904
	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: drag chain use, Welding spark resistant, PUR, halogen-free, unshielded, 5 m	DOL-1204-W05MD	6020399
	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 10 m	DOL-1204-W10M	6010541
~	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 10 m	DOL-1204-W10MC	6025905
	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 15 m	DOL-1204-W15M	6036474
	Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 20 m	DOL-1204-W20M	6033559

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

## WORLDWIDE PRESENCE:

Contacts and other locations -www.sick.com



Online data sheet

